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PROGRESS REPORT

ON

FOREST ADMINISTRATION

IN

UPPER BURMA

FOR

1891-92.

By J. W. Oliver, Esq.,
Conservator of Forests.

WITH A REVIEW BY THE CHIEF COMMISSIONER AND THE ORDERS OF THE GOVERNMENT OF INDIA.

RANGOON:
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No. 73 F., dated Calcutta, the 19th January 1893.

From—SIR E. C. BUCK, KT., C.S.I., *Secretary to the Government of India,*
To—*The Chief Commissioner of Burma.*

I AM directed to acknowledge the receipt of Mr. Kynoch's letters Nos. 357—2R.-7 and 359—2R.-10, both dated the 18th August last, forwarding the Progress Reports on Forest Administration in Lower and Upper Burma for the year 1891-92, together with your Resolutions thereon.

2. The area of reserved forests has been increased by 1,036 square miles, and at the end of 1891-92 amounted to 6,100* square miles, being only 4 per cent. of the total area of the Province.

* Excluding Karen areas.

3. In Upper Burma, however, the work of forest-settlement has only now been fairly started; it resulted in the highly creditable addition of 1,024 square miles during the year. Very extensive forest areas, aggregating upwards of 16,000 square miles, have been examined during recent years and, with a view to final reservation, have been placed under the intermediate protection of Chapter II of the Forest Regulation. And a considerable portion of this area, amounting to 2,189 square miles, has already been notified as a preliminary step to a regular settlement; while over 587 square miles, previously notified, the settlement operations have been completed and are awaiting the final orders of the Local Government. The Governor General in Council has observed with pleasure the large amount of forest-settlement work disposed of by local officers, and is gratified to learn that, in view to push on the work, you propose to maintain an additional staff of Forest Settlement Officers during the open season. A systematic forest administration can only be built up on the sound foundation of a permanent and final settlement of the property, which leaves no room for individual differences of opinion and permits officers to devote their whole energy and time to the technical administration of the State-forests. These advantages seem to be fully recognized in Burma.

4. The original reservation in Lower Burma was guided by the wish to secure as State-forests the more important teak-producing areas. This work had been more or less completed in previous years, but the recent development of a trade in other forest-species, and the necessity of providing a more permanent supply of wood for the important cutch industry, have apparently forced on the local administration the conclusion that the reserved forest area should be considerably augmented. The Government of India are pleased to observe that, though the area actually added during the year is insignificant, the question has, since the necessity of the step has been recognized, been approached in a thorough and business-like manner.

5. A special feature in the forest-settlements of Burma is the enclosure within the reserves of Karen areas, in which special rights, including that of temporary cultivation, are conceded to the original taungya-cutting inhabitants of the forest areas, but from which all new settlers are strictly excluded. This system was first experimentally introduced during the settlement of the Thonzé forest in Lower Burma in 1877, and seems to have been adhered to in subsequent settlements. It may, therefore, be presumed to have answered the purposes for which it was designed; but the Government of India will be glad if the opinions of the local administration on this point can be recorded in the Reports for the current year.

The Karen areas constituted up to the end of the year under review amounted to 574 square miles, or upwards of 9 per cent. of the area of reserved forests.

6. The demarcation of forest-reserves has received satisfactory attention, and considerable progress has been made in their topographical survey.

7. The examination of the forests from a professional point of view, as regards their composition, rate of growth and other natural features, embracing where necessary concomitant valuation-surveys, and the careful and detailed record of such observations, compose the ground-work of a sound technical management. Work of this kind should never cease in forests under professional administration, and is indispensable in the vast and valuable, but even yet partially known, State-forests in Burma. It is satisfactory that considerable attention has been paid to these questions in the Pegu and Upper Burma Circles, but the subject seems to have been somewhat neglected in the Tenasserim Circle. The Government of India would be glad if you would impress on Conservators that such examination and detailed record of observations is considered to form an important part of the duties of every Divisional Officer, Extra-Assistant Conservator and trained Ranger. It was with this special object that the maintenance of a Forest Journal for each forest-unit or administrative charge was prescribed.

The progress made in the preparation of Working-Plans and Plans of Operations has been steady, and it is observed that the plans have on the whole been well adhered to.

8. The number of forest-offences has increased in every Circle, but is as yet unimportant in comparison with the large forest area under protection.

9. The fines inflicted on persons convicted of having caused fires in reserved forests were doubtless inadequate, and the Government of India are glad to observe that this matter has attracted your attention. Though fire-protection was unusually successful during the dry season of 1892, it is surrounded in Burma by exceptional difficulties, and all efforts to extend it merit the cordial support of the district administration. In the Pegu Circle the successful results obtained are attributed to the notices issued under your direction by the District Officers. The Government of India trust that a steady continuance of this wise policy will cause a gradual reform in fire-conservancy, though it is by no means to be expected that the inhabitants of Burma should all at once change their habits.

10. The inspection of the areas burnt in the dry season of 1891 showed that, though some planted areas had been disastrously damaged, the young teak trees were rarely destroyed, and the injury was in most cases such as the trees would outgrow in a year or two. This power of resistance of the teak tree is no doubt satisfactory, in view of the fire-exposed condition of most Burma teak forests, and in fact accounts for their very existence under such adverse circumstances; but it is no excuse, in the opinion of the Government of India, for the deliberate withdrawal from fire-protection of 217 acres of plantations which is reported in paragraph 15 of the Report of the Tenasserim Circle. This area seems to have been abandoned without sanction and a full explanation should be called for.

11. The remarks on unaided natural reproduction are generally extremely brief, and I am to suggest that the effect of fire-protection—which has now been continued for a considerable number of years in some of the reserves—on reproduction and the general forest-growth should be studied and noticed in the next Report. In so far, however, as the observations refer to the flowering of bamboos, the reports of the Upper Burma and Pegu Circles have a peculiar interest and importance; for the fact that the reproduction of teak in Burma

takes place generally during the periodical flowerings of bamboo, which had been accepted on inference and a study of age-classes, has now been further verified by observations made during the flowering of *Dendrocalamus Hamiltonii*; and a more general flowering of the larger bamboos will give the Burma foresters the opportunity of assisting nature by introducing a larger percentage of teak into the composition of the natural forest. It is hardly to be expected that much can be effected in the scarcely settled forests of Upper Burma; but the operations now being carried on in the Kôn Bilin reserve, in areas on which the *Tinwa* (*Cephalostachyum pergracile*) has flowered, indicate that the forest establishment of the Pegu Circle are alive to the importance of the question. A careful record should be kept of each operation, including a description of the state of the forest at the time the work was begun.

12. The 3,206 acres which were added during the year to the area of taungya plantations include 25 acres in the Tenasserim Circle, with a density of less than 0·3, and 28 acres in the Pegu Circle, with a density of 0·4. These areas should at once have been excluded as failures. Apart from them the progress made in the Tenasserim Circle amounts to 1,479 acres, with an average density of 0·62, and in the Pegu Circle to 1,674 acres, with an average density of 0·72, which is a satisfactory result of the year's work.

A remark made in paragraph 23 of the Pegu Circle Report proves that weeding operations may cause great damage in case of a fire. It would be interesting to know during what season the plantation in which the damage occurred was weeded.

13. Considerable attention was paid in the Pegu Circle to the improvement of the natural forest by the removal of dominant overgrowth and creepers. On a smaller scale similar work was carried on in the Upper Burma Circle, but again no such measures seem to have been attempted in the Tenasserim Circle, though the Government of India drew special attention to this point in paragraph 9 of their review of the Report for 1890-91.

14. The experiments made regarding the introduction of exotics are interesting, but it seems that, with the exception perhaps of *Hevea Braziliensis*, none of the species as yet tried will ever become of economic importance.

15. The outturn during the year of forest-produce is shown in the following table:—

Class of Forest, and Agency by which removed.	Timber.			Fuel.			Bamboos.			Other minor produce.		
	Lower Burma.	Upper Burma.	Total.	Lower Burma.	Upper Burma.	Total.	Lower Burma.	Upper Burma.	Total.	Lower Burma.	Upper Burma.	Total.
	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	No.	No.	No.	R	R	R
Reserved.												
Government	1,229,780	...	1,229,780	...	...	...	...			...		
Purchasers	461,318	1,463,665	1,924,983	282,200	...	282,200	2,496,120			36,460		
Right-holders	24,260	...	24,260	...	48,800	48,800	26,375			147		
Free-grants	...	...	...	...	...	...	...			...		
Total	1,715,358	1,463,665	3,179,023	282,200	48,800	331,000	2,515,025			36,607		
Protected.												
Government	...	256,843	256,843	...	...	...	...			...		
Purchasers	...	5,462,627	5,462,627	...	1,457,798	1,457,798	...			...		
Right-holders	...	...	...	...	...	...	...			...		
Free-grants	...	169,350	169,350	...	...	...	...			...		
Total	...	5,888,820	5,888,820	...	1,457,798	1,457,798	...			...		
Unclassed.												
Government	1,475,732	...	1,475,732	...	...	...	...			...		
Purchasers	8,510,928	...	8,510,928	2,519,834	...	2,519,834	3,428,878			14,843		
Right-holders	52,253	...	52,253	...	...	...	...			...		
Free-grants	18,823	...	18,823	...	...	...	...			...		
Total	10,057,736	...	10,057,736	2,519,834	...	2,519,834	3,428,878			14,843		
GRAND TOTAL in 1891-92	11,773,094	7,352,485	19,125,579	2,802,034	1,506,598	4,308,632	*5,951,373	*11,845,936	17,797,309	51,450	2,37,287	2,88,737
" " " 1890-91	8,921,630	9,003,888	17,925,518	4,082,200	1,740,058	5,822,258	†2,445,555	§14,882,376	17,327,931	71,127	1,97,147	2,68,274
Difference in 1891-92	+2,851,464	−1,651,403	+1,200,061	−1,280,166	−233,460	−1,513,626	+3,505,818	−3,036,440	+469,378	−19,677	+40,180	+20,503

Value	*R15,382	‡+R27,884	=R43,166
"	†R 5,619	§+R31,296	=R37,915
Difference in 1891-92	+R9,763	−R4,412	+R5,251

The most remarkable feature of the year's transactions was the large increase which took place in the extraction of other species than teak; this is accounted for partly by greater activity in canoe and boat building, and partly by the constantly increasing demand for railway sleepers and shingles of pyinkado and pyinma. The principal items of minor forest-produce extracted from the Burma forests are cutch and rubber. The income derived from the former amounted to R1,48,698, and from the latter to R1,18,343.

16. The financial results of the year, as compared with those of 1890-91 as well as with the average of the last five years, are shown in the following table:—

Circle.	Receipts.	Charges.	Surplus.	Proportion of Surplus to gross Revenue.
	R	R	R	Per cent.
Pegu	22,07,511	9,20,826	12,86,688	58
Tenasserim	6,50,600	3,48,913	3,01,687	46
Upper Burma . . .	13,27,300	3,73,859	9,53,441	72
Total in 1891-92 . . .	41,85,414	16,43,598	25,41,816	61
Total in 1890-91 . . .	43,21,968	13,88,789	29,33,179	68
Difference in 1891-92 . .	—1,36,554	+2,54,809	—3,91,363	—7
Average for the five years ending 1890-91 . . .	36,14,900	14,48,874	21,66,026	60

The drop in the revenue was entirely due to an unfavourable floating season in Upper Burma, and would have been severer but for a slight rise in the price of teak and other circumstances which combined to maintain a fair revenue.

17. His Excellency the Governor General in Council directs me to congratulate you on the successful administration of your forests, and to say that he endorses your commendation of the ability and tact with which Mr. Oliver has conducted the forest business in Upper Burma, and of the good work done by the Conservators of the Pegu and Tenasserim Circles.

APPENDIX SHOWING THE DISCREPANCIES NOTICED IN THE LOWER BURMA FOREST ADMINISTRATION REPORT FOR 1891-92.

TENASSERIM CIRCLE.

Para. 23 of Report (Statement).—The figures 645, in the column "Number of plants raised per acre" against "Total, Salween-Attaran Division," should apparently be 644. Similarly the figures 660 immediately below should apparently be 655.

Para. 44 of Report (3rd clause).—As compared with the corresponding figures of 1890-91 there was an increase of upwards of 9,000, not 8,000 as here stated, in the number of logs of unreserved woods extracted by purchasers in 1891-92.

Form No. 50 (Breaches of Forest Rules).—The column "Cases pending from 1890-91" is blank, whereas, according to the similar return for that year, there was one case for composition pending at the close of the year.

PEGU CIRCLE.

Para. 11 of Report (Statement).—The addition of the detailed figures under "Actual cost of permanent establishment in 1891-92," gives a total R75,461, and not R74,461.

Para. 50 of Report (Statement).—According to the figures entered in columns 1 to 7, there were 433, and not 803, logs of drift timber in hand at the close of the year. The error is due to the fact that a balance of 89 logs is shown against "Agency," whereas there was no balance over, but on the other hand a deficit of 287 logs at the close of the year.

Paras. 60, 61, 63 and 64 of Report and Form No. 62 (Financial Results).—The "Grand Total of Expenditure," and the "Surplus" of the year are here given as R9,20,587 and R12,86, 927, respectively; whereas, according to Form No. 58, the figures should be R9,20,826 and R12,86,688.

Para. 62 of Report (clause 1).—As compared with the corresponding figures of 1890-91, the amount expended on extraction of timber departmentally was R1,77,589, not R1,77,397, more in 1891-92, the result in favour of the year 1891-92 being R1,04,016, and not R1,04,208.

Para. 62 of Report (clause 3).—As compared with the corresponding figures of 1890-91, the expenditure on demarcation and improvement was R33,491, and not R33,441, more in 1891-92.

Form No. 54 (Outturn of Timber and Fuel).—The value of timber removed by right-holders from reserved forests has not been taken into calculation in the last column of the form; consequently the figures purporting to represent in c. ft. the total outturn from reserved forests and forests of all descriptions are incorrect. These figures should be 1,683,916 and 12,114,219 respectively, instead of 1,680,756 and 12,111,059.

Form No. 55 (Outturn of Minor Produce).—The value of the minor produce (R212) removed by right-holders should have been shown in the "Summary" of this form.

CHIEF COMMISSIONER'S RESOLUTION.

Para. 2 and para. 10 (Statement).—According to the figures given in Form No. 54, the quantity of timber extracted in 1891-92 from the forests in Lower Burma (excluding wood extracted for fuel) was 235,462, and not 235,328, tons.

Para. 14 (Statement).—According to the figures given in Appendix C, the quantity of teak exported from Rangoon during 1891-92 was 99,636, and not 99,647, tons, and the value thereof was R75,12,713, and not R75,13,397.

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PROGRESS REPORT OF FOREST ADMINISTRATION IN THE UPPER BURMA CIRCLE FOR 1891-92.

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RESOLUTION

ON THE

FOREST ADMINISTRATION PROGRESS REPORT

OF THE

UPPER BURMA CIRCLE

FOR

The year 1891-92.

Extract from the Proceedings of the Chief Commissioner, Burma, in the Forest Department,—No. 2R.-10, dated the 15th August 1892.

READ—

Report of the Conservator on the administration of the forests, Upper Burma circle, for the year 1891-92.

Reservation of forests.

RESOLUTION.—The most important forest work done in Upper Burma in 1891-92 was the reservation of forests. During the year 1,024 square miles of forests were notified as reserved, and at the end of the year the total area of reserved forests in Upper Burma amounted to 1,059 square miles. Of the forests reserved in 1891-92 785 square miles consisted of forests in the Pyinmana division, which are among the most valuable teak-producing areas in Burma. During 1891-92 1,333 square miles were notified with a view to reservation, and the total area awaiting settlement at the end of the year amounted to 3,978 square miles. During the open season of 1891-92 Lieutenants Green and Townsend, Assistant Commissioners, and Mr. Hertz, Extra Assistant Commissioner, were employed as Forest Settlement Officers in Upper Burma and completed enquiries regarding 1,202 square miles of these forests. Enquiries were held with reference to a further area of 587 square miles by local officers in addition to their other duties. During the current year final orders will be passed regarding the reservation of these areas. The notified area still awaiting enquiry at the end of 1891-92 was 2,189 square miles. The Officiating Chief Commissioner hopes that it will be possible to employ two Assistant Commissioners on forest settlement duty during the next open season. The importance of pushing on the work of forest reservation in Upper Burma is fully recognized, but, as was remarked in last year's resolution, officers can with difficulty be spared from district work for forest settlement duty.

Examination of forests.

2. The total area of protected forests at the end of 1891-92 was 16,461 against 16,014 square miles at the end of 1890-91. An area of 2,275 square miles was added during the year and an area of 1,828 square miles was excluded, the greater part of which consisted of forests removed from the category of protected to that of reserved forests. Examination of forests was carried on principally in the Chindwin division, where 543 square miles were added to the protected area; the Pyinmana division, where 664 square miles; and the Yaw division, where 650 square miles were added. Among the forests examined during the year were the rubber

forests in the Hukong valley. These were visited by Mr. O'Bryen, Assistant Conservator, who accompanied the Maingkwan column in its exploration of the valley during the cold weather of 1891-92. The information collected by Mr. O'Bryen is summarized in paragraph 6 of the Conservator's report. Owing to the remoteness of the forests it will not probably be possible to exercise any effective supervision over their working for some time to come.

Surveys and working plans

3. The total length of line traversed, with chain and plane-table, was 1,940 miles against 2,554 miles in 1890-91. The largest amount of work of this description was done in the Chindwin and Mandalay divisions and in the Shan States. The valuation surveys executed during the year extended over an area of 9,635 acres against 20,446 acres covered last year. The great diminution in the amount of work done was due to the employment of several officers on forest settlement and demarcation. The greater part of the work done under this head was executed in the Chindwin and Mandalay divisions. Rough working plans were framed for the Taungdwingyi and Kyaw and Yaw forests from materials collected last year. As was remarked last year, the preparation of plans of this description is a work of much importance and should be steadily proceeded with.

Forest rules.

4. Several changes were made during the year in the Upper Burma Forest Rules. These are summarized in paragraph 31 of the Conservator's report. The most important of them were the changes made in the form of cutch licenses, the prohibition of the felling of dead and girdled teak trees without license, and the introduction of a form of license for the cutting of certain other kinds of trees in certain districts.

Alteration in cutch licenses.

5. The object of the changes in the form of cutch license was stated in last year's resolution. The Officiating Chief Commissioner is glad to learn from the Conservator's report that the new system has worked well. From the remarks made by the Deputy Commissioner of Meiktila (page xliii of the Appendices), however, it appears that undersized trees are still destroyed in large quantities. The Deputy Commissioner suggests that licenses should be made liable to confiscation if undersized trees are found cut or mutilated in the vicinity of the cutch camp in which they are held. The Officiating Chief Commissioner doubts the expediency of adding such a condition as it would place every holder of a license at the mercy of any malicious person who might cut an undersized tree in the vicinity of his camp. The cutting of undersized cutch must be guarded against by careful supervision and by strictly limiting the number of licenses. The decision as to the number of licenses to be issued in any particular tract must be left to the Forest Department, which alone knows the capabilities of the forests. If it is found impossible to prevent wholesale destruction of undersized trees in any particular area, the issue of licenses for cutting cutch within that area should be stopped altogether and the question of forming it into a reserved forest should be taken up. It may be added here that among the reserves enquired into during the year under report were 201 square miles of cutch forest in Minbu and 254 square miles of mixed teak and cutch forest in Magwe. Proposals should be submitted at an early date for reserving the untouched cutch forests which still remain in the Yaw and Chindwin divisions.

Rule regarding extraction of dead and girdled teak.

6. The other changes in the Forest Law referred to in paragraph 4 were made for the purpose of securing to Government a share in the profits on timber extracted for trade purposes under certain circumstances. Until the year under review teak extracted locally for trade purposes was untaxed unless it passed a revenue station. The new rule made in 1891-92 prohibits the extraction of dead and girdled teak without a license and provides for the issue of licenses for its extraction, duty being levied only in cases in which it is extracted for trade purposes. Licenses are issued free of duty when the teak is required for domestic purposes. In their remarks on the forest report, which are printed on page xlii of the Appendices, the Commissioner of the Central Division and the Deputy Commissioner of the Lower Chindwin district complain that hardship is caused by the rule referred to above. The hardship consists in the delays which occur in the issue of free licenses. It seems doubtful, however, whether a man suffers any great hardship by having to wait a few months for timber which he wishes to obtain free of duty. The building of monasteries and of substantial houses is not usually a work of any urgency. If the Commissioner and Deputy Commissioner are aware of any cases in which the rules have caused real hardship, they are requested to report them. This remark applies also to the Commissioner's observation that "some Forest Officers, too, put difficulties in the way of granting passes and so harass and worry the people." Any cases of oppression or annoyance of the kind referred to should be at once brought to the notice of the Conservator by the Deputy Commissioner to whom they are reported.

Rule regarding the cutting of pyinma and certain other trees.

7. The rule prohibiting the felling of pyinma and certain other classes of timber without a license was first introduced in the Pyinmana and Yamèthin districts, where large quantities of trees of these classes were being felled for conversion into railway sleepers and for other trade purposes. A similar rule was introduced later in the year into other districts, and it will probably be found necessary to make its application general in Upper Burma in the course of the next few years.

Forest offences.

8. The following table exhibits statistics of offences during the last three years:—

Year.	New cases taken into Court.	Compounded cases.	Total.	Proportion of convictions to total number of cases decided by Courts.
1889-90	99	47	146	81
1890-91	110	115	225	71
1891-92	122	253	375	73

The increase was contributed principally by cases connected with cutch, the number of such cases having risen from 73 to 172. The increase was, however, more nominal than real, as confiscations of cutch licenses which are included in the above statistics and which numbered 136 were excluded from last year's report.

Fire-protection.

9. The only forest in Upper Burma in which systematic fire-protection was attempted was the Yanaungmyin reserve in the Pyinmana division, where 7,040 out of 8,960 acres were protected at a cost of Rs. 788. In the Ruby Mines reserves protection by cleared lines was not attempted, but 6,310 out of 10,320 acres were protected by putting out fires when they occurred.

Experimental cultivation.

10. Experiments were continued with eucalyptus in 1890-91. Seed was planted at several places in the plains but without success. In the hills plantations were maintained with some success at Bernardmyo, Mogôk, and Maymyo, and a number of young plants were also raised at various places in the Shan States. The plantation of English fruit trees which is maintained at Bernardmyo did not thrive very well in 1890-91, but it is hoped that with better management it will be more prosperous in future.

Girdling.

11. The girdling programme of the year provided for the killing of 32,000 trees, but only 20,048 were girdled. The failure to complete the programme was due to want of trees, a sufficient number not having been found in the various forests in which girdling operations were carried on. The experience of 1890-91 confirms that of previous years, namely, that with few exceptions the Upper Burma forests have been much overworked and that a long time must elapse before they are restored to a normal condition of productiveness.

Extraction of timber.

12. The quantity of timber which passed revenue stations in 1891-92 and the two preceding years is shown in the following table:—

	Teak.	Other reserved kinds.	Unreserved kinds.	Firewood and charcoal.	Total.
	Tons.	Tons.	Tons.	Tons.	Tons.
By Government agency ...	5,110	...	27	...	5,137
By lease-holders	71,592	...	...	...	71,592
By local purchasers	37,444	66	29,424	30,132	97,066
Under free permits	3,387	...	...	...	3,387
Total 1891-92 ...	117,533	66	29,451	30,132	177,182
Total 1890-91 ...	160,713	432	18,933	34,801	214,879
Total 1889-90 ...	180,609	651	8,335	24,669	214,264

The most noticeable differences between the outturn of 1891-92 and that of 1890-91 was the falling off in the outturn of teak and the increase in the outturn of unreserved woods in 1891-92. The diminution in the outturn of teak was due to the drought which prevailed in the dry zone of Upper Burma during the rains of 1891-92. Owing to this drought some 40,000 or 50,000 tons of teak which would have been floated down to Lower Burma between September and December in an ordinary season remained neaped in streams in the Pyinmana district at the end of the year. The outturn of timber from the Chindwin forests, where the rainfall was normal, exceeded that of the previous year by between 8,000 and 9,000 tons. The increase of upwards of 10,000 tons in the

outturn of unreserved woods was a satisfactory feature of the year's report as indicating that the resources of the Upper Burma forests in timber of other kinds than teak are gradually becoming more fully utilized. The timber thus extracted was principally pyinkado, extracted for making sleepers for the Mu Valley Railway.

Minor forest produce.

13. The total revenue from minor forest produce was Rs. 2,65,160 against Rs. 2,29,449 in 1890-91 and Rs. 1,67,114 in 1889-90. The principal increase was under cutch, the revenue from which rose from Rs. 80,405 to Rs. 1,11,040. The increase was due to the issue of a larger number of licenses than were issued in 1890-91 in districts of the dry zone where scarcity prevailed. In these parts it was necessary to provide occupation for the people and it was not advisable to limit the issue of licenses to the number which would have been fixed solely on a consideration of the requirements of forest conservation. The necessity of limiting the number of licenses to the capabilities of forests has been impressed on all officers concerned, and there will probably be a considerable diminution in the number issued in 1892-93. There may, however, be an increase of revenue as the license fee has recently been raised from Rs. 20 to Rs. 60, and in certain forests in the Western division, which are about to be reserved, it has been increased to Rs. 150. The work of cutch-boiling is so lucrative that workers can, as experience in Lower Burma has shown, pay these enhanced prices and yet make a handsome profit. The revenue from rubber increased from Rs. 1,08,678 in 1890-91 to Rs. 1,18,343 in the year under review. As was noted in an earlier part of this review, the rubber forests were visited in January and February 1892 by a Forest Officer. He found, as was to be expected, that the forests had been wastefully worked, but it is reported that the Kachin Chiefs who collect and sell the rubber to Chinese merchants are beginning to realize that it is not in their interests to destroy trees wholesale by over-tapping. Rules were made during the year on the model of rules in force in Assam fixing the dates within which tappings may be made and prohibiting the tapping of trees in ways likely to injure them permanently. These rules will, however, remain a dead-letter until the Hukong valley is brought under direct administration, a task which is not likely to be undertaken at present.

Revenue and expenditure.

14. The revised estimates of receipts and expenditure in the Upper Burma Forest circle in 1891-92 as finally sanctioned by the Government of India were—

					Rs.
Receipts	...	...	...	...	13,00,000
Expenditure A } Expenditure B }	...	...	...	...	4,00,000
			Surplus	...	9,00,000

The gross receipts of the year were Rs. 13,27,300, the expenditure Rs. 3,73,859, and the surplus Rs. 9,53,441. The corresponding figures for 1890-91 were Rs. 16,44,297, Rs. 3,02,315, and Rs. 13,41,982. The decrease in revenue was due to a diminution in the quantity of timber extracted by lessees in consequence of the unfavourable floating season. If the season of 1892-93 is favourable, large quantities of timber which would under normal conditions have been brought to Lower Burma in the end of 1891 will be brought down in the

end of 1892, and the revenue of 1892-93 will, so far as can be at present foreseen, be unusually large. If receipts from lessees' timber, which yielded Rs. 4,47,780 less than in 1890-91, are left out of account, the gross revenue of 1891-92 exceeded that of 1890-91 by, in round numbers, Rs. 1,30,000. This increase was due to larger receipts on account of timber extracted by Government agency, of drift timber, and of minor forest produce. The increase is satisfactory and creditable to the Forest Officers to whose energy in developing the forest resources of the country it is due. The large increase of Rs. 71,544 in expenditure was due in part to payments of an exceptional nature, namely, refunds, in part to increases of establishments and allowances occasioned by the developement of forest operations and by the re-organization of the Forest Department.

Forest leases.

15. During 1891-92 the Mosit, Kaukkwè, and Nansônti forests, which formed part of the forest area originally held by Maung Bauk, were leased to Haji Mahomed Hadi, who also holds a lease of the Mogaung forest. The minimum outturn which the lessee undertook to extract from these forests in a year was reduced from tons 4,000 to tons 2,000. During 1891-92 the lessee extracted 135 tons only, and the question of exacting the penalty for short extraction prescribed by the lease is now under consideration. In August 1891 a contract was concluded with Mr. Darwood for the extraction of dead and girdled teak trees in certain forests in the Möngmit (Momeik) Shan State. The lease of the Theingôn forest was surrendered by the Bombay Burma Trading Corporation from the end of 1891.

Shan States forests.

16. As was mentioned in the resolution on last year's report, the principal forests in the Shan States were visited by a Forest Officer in the dry weather of 1891-92 with a view to the preparation of a scheme for their administration. In Burmese times the right of the sovereign power to the forests in the Shan States was always asserted and maintained. Some forests were leased to the Bombay Burma Trading Corporation, others were left in the hands of the Sawbwas who were permitted to work them on payment of tribute or royalty which was variously assessed in various States. The commonest form of assessment was the levy of a fixed sum on each elephant used in forest work. Until 1890 no action was taken to obtain for Government its share in the income derived from working forests which had remained in the hands of Sawbwas. In 1890 it was decided that the forests should be examined by a Forest Officer. Pending the receipt of his report the Sawbwas of Maingpan and Maukmè, and the Myoza of Thatôn, whose States contain the principal forests, were formally authorized to work the forests in their States on payment of a royalty of Rs. 200 a year on each elephant used in forest work, and on condition that they complied with Rules 8 to 14 of the Upper Burma Forest Rules which regulate the manner in which trees may be girdled. The report of the Forest Officer deputed to examine the States showed that some of the forests were much richer than others, that all had been wastefully worked, and that the Sawbwas had entered into various improvident agreements with speculators, mostly from Moulmein, by which they pledged the forest resources of their States for comparatively small sums. On a consideration of the Forest Officer's report it was decided that the time was not come for undertaking

the administration of the forests by Government agency. It was further made clear that the royalty of Rs. 200 per elephant which had been fixed in 1890 was too high, although some States could pay more than others. The Sawbwas were accordingly permitted to continue the working of their forests, and the amount of royalty to be paid by each Chief was fixed on a calculation of the profit derived from them. The sums thus fixed were Rs. 50 per elephant for Maukmè, and Rs. 100 for Maingpan and Thatôn. It was further ordered that the royalty should be increased 50 per cent. in the case of elephants employed in connection with sawpits, which yield large profits. This arrangement is to remain in force till the end of 1892. At the same time the Superintendent and Political Officer of the Southern Shan States was directed to enquire into the circumstances of the various agreements entered into by Sawbwas with Moulmein speculators and to make proposals for effecting arrangements which would extricate the Sawbwas from their indebtedness. The principle was laid down that Government does not recognize the validity of any of the agreements in question, inasmuch as they alienated rights in forests which belong to Government and of which the Sawbwas have no authority to dispose. It was, however, considered expedient to arrange settlements between the Sawbwas and their creditors lest the Sawbwas should oppress their subjects in order to procure funds for meeting extortionate demands. A report is at present awaited from the Superintendent as to the action taken by him on these orders.

Services of officers.

17. The year under review is the last in which Upper Burma will be administered by a single Conservator. From the beginning of the year 1892-93 it has been divided into two circles, the Eastern and the Western, the former circle embracing, roughly speaking, the country to the east, the latter the country to the west, of the Irrawaddy. During the last three years the forest administration of the whole of Upper Burma has been in the hands of Mr. Oliver, and the Officiating Chief Commissioner takes this opportunity of acknowledging the eminent ability and success with which he has conducted it. Mr. Fryer also acknowledges the good services of the officers mentioned by Mr. Oliver in his report.

By order of the Chief Commissioner,

C. G. BAYNE,

Secretary.

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PROGRESS REPORT

OF

FOREST ADMINISTRATION

IN THE

UPPER BURMA CIRCLE

FOR

The year 1891-92

BY

J. W. OLIVER, Esq., Conservator of Forests.

CHAPTER I.

Area and Boundaries.

1.—Area.

A.—Reserved Forests.

Reserves sanctioned.

The following tracts have been notified as reserved forests :—

		Sq. miles.	Notifications No.
Chindwin division ...	Kampat	59	241 of 14th October 1891.
	Matu	180	19 of 23rd January 1892.
Pyinmana division ...	Yanaungmyin	14	298 of 7th December 1891
	Kaing	20	299
	Palwè	130	300
	Pozaungdaung	70	301
	Taungnyo	100	302
	Yèni	66	303
	Ngalaik	110	304
	Minbyin	145	305
	Yônbin	130	306
	Total ...	1,024	

The total area of sanctioned reserved forests is now 1,059 square miles, of ıich 108 square miles are burdened with permanent taungya-cutting privileges granted to 228 persons and their descendants subject to the condition of their planting up the areas cultivated with teak if required to do so. The privilege of cutting taungyas up to December 1896 on similar conditions over an area of 113 square miles, which includes the permanent taungya area, has also been granted to 385 persons. Arrangements have been made to gradually eliminate the privileges of the ya-cutters by advancing them sufficient money to buy cattle and take to permanent cultivation.

Areas preliminarily notified.

2. During the year under review 1,333 square miles were notified as proposed reserves. The areas now awaiting settlement are shown in the following statement:—

Division.	District.	Name of forest.	Notified before 1891-92.	Notified during 1891-92.	Total of each division.	No. and date of notification.
			Sq. miles.	Sq. miles.	Sq. miles.	
Bhamo ...	Bhamo ...	Uya Hatha ...	24	...	251	No. 112 of 17th July 1890.
	Katha ...	Mohnyin ...	60	...		No. 167 of 2nd October 1890.
	Bhamo ...	Hmangin ...	41	...		No. 168 of 2nd October 1890.
	Do. ...	Nampa ...	...	126		No. 238 of 13th October 1890.
Chindwin..	Upper Chindwin.	Taungdwin ...	262	...	1,121	No. 161 of 23rd November 1888.
		Bôn ...	114	...		No. 222 of 11th December 1890.
		Kindat ...	132	...		No. 7 of 8th January 1891.
	Pakôkku ...	Laungtaung ...	96	...		No. 10 of 8th January 1891.
		Kunzè ...	116	...		No. 11 of 8th January 1891.
	Upper Chindwin.	Yu ...	193	...		No. 39 of 19th February 1891.
	Lower Chindwin.	Patolôn ...	...	40		No. 78 of 11th April 1891.
	Upper Chindwin.	Ahlaw ...	...	49		No. 138 of 1st July 1891.
	Lower Chindwin.	North Yama ...	...	119		No. 10 of 21st January 1892.
Katha ...	Katha ...	Petsut Auktaw..	74	...	1,199	No. 37 of 27th February 1890.
		Mèza ...	836	...		
		Mawhun ...	42	...		
	Momeik ...	Setkala ...	747	...		No. 197 of 13th November 1890.
		Nammè ...				
		Kun and Thè chaung ...				
		Maingtha ...				
		Nahan ...				
		Nampaw ...				
Mu ...	Ye-u ...	Yabin ...	60	...	345	No. 88 of 3rd July 1889.
		Pyaungthwe ...	70	...		
		Maingwun ...	60	...		
		Sareiktha ...	15	...		
		Nankyitha ...	107	...		No. 54 of 10th April 1890.
		Nanbyan ...	33	...		
Minbu ...	Minbu ...	Pazu chaung ...	63	...	634	No. 215 of 8th December 1891.
		Tôkto chaung ...				
		Tichaungwa ...				
		Paung chaung...				
		Nwamadaung ...	...	138		No. 197 of 16th September 1891.
		Môn West ...				
	.....	Yabè ...	...	62		No. 240 of 13th October 1891.
		Kyaukmigyaung	...	28		
		Kinmuntaung ...	...	49		
		Yinmalè ...	...	17		
		Ngamin chaung	...	85		
		Sadôn ...	...	98		
		Sun chaung ...	...	94		
Yaw ...	Pakôkku ...	Kyauksit ...	...	172	428	No. 274 of 23rd November 1891.
		Kyaw ...	...	234		No. 274 of 21st January 1892.
		Pindaung ...	...	22		
		Total ...	2,645	1,333	3,978	

Areas enquired into by Forest Settlement Officers.

3. Two special officers were appointed for forest settlement duty, Lieutenant G. E. T. Green, Assistant Commissioner, for the proposed reserves in Momeik and Magwe, and Mr. W. A. Hertz, Extra Assistant Commissioner, for those in the Minbu district. The former officer completed the enquiries in re-

gard to the group of reserves in Momeik and the Yabè, Sun, and Sadôn reserves in Magwe, 1,001 square miles in all, and Mr. Hertz the enquiries in regard to the cutch reserves in Minbu, 201 square miles. In the Upper Chindwin district the Deputy Commissioner carried out the enquiry in regard to the Taungdwin reserve, 262 square miles. The proceedings in regard to the Yu and Kindat reserves, which were enquired into during the previous year, were on the 31st March still in the hands of the Deputy Commissioner. The total area regarding which enquiries have been completed is consequently 1,789 square miles.

Further reserves in progress.

4. Proposals for the reservation of the following tracts in the Mu division were submitted, but the preliminary notifications had not been issued before the close of the year :—

District.	Forest.	Sq. miles.
Katha ...	Tinwa	24
	Nabè	13
	Wabo	16
	Kalawpa	8
	Sinlin	48
Shwebo ...	Thaw	171
	Total ...	280

The reservation of the Pa chaung tract in Ywangan, mentioned in paragraph 3 of last year's report, was abandoned on the recommendation of the Superintendent and Political Officer, Southern Shan States.

B.—Protected Forests.

Alterations in Form 49.

5. The estimated area of the protected forests shown in Form 49 has undergone considerable alteration. One thousand and twenty-four square miles have been transferred to reserved forests, modifications of areas previously given have been made in accordance with further information, and some newly examined forests have been added as well as the areas protected under Rule 16C. The total area is now estimated at 16,461 square miles, but this includes some 4,500 square miles, chiefly in the Upper Chindwin district, which have either not yet been visited or only examined in a very cursory manner. The India-rubber forests have not been included, as it is impossible to form any estimate of their area, and the protection they receive is at present purely nominal. The following is a short description of the forests examined during the year :—

Forests in the Bhamo division.

6. *The Sinkan forests* are rich in teak, but most of the large trees have been removed; reproduction has been very good, and, if protected from fire, the forests should rapidly recover.

The Kaukkwe forests have at one time contained a large quantity of teak, but they have been almost ruined by ya-cutters and timber-traders, teak having almost entirely disappeared in the portion below the mouth of the Nansônti stream.

In *the Mozit forest* there is still some fine teak not girdled; much damage has been done in parts by indiscriminate felling, but the greater part of the forest is still worth reserving.

A small block of forest containing much well-grown teak was found on the Namhaha stream adjoining the proposed Mohnyin reserve, in which it will be included.

Mr. O'Bryen was deputed to accompany the Maingkhwan column sent to explore the rubber tracts in the Hukong valley, which produces more than half the rubber brought to Bhamo. The column only spent 24 days in the Hukong valley, and, owing to difficulties in the way of supplying rations for his escort, Mr. O'Bryen never got nearer than within six days' march of the largest forests, which are said to be on the hills to the north and north-east of 'Ntuptumsa at the sources of the Thabyè and Tawan chaungs. After leaving the Hukong valley Mr. O'Bryen went to Fort O'Donnell, selecting *en route* a site for an experimental rubber plantation. He then proceeded down the Uyu river as far as Momôn, whence he struck across to Lawsôn near the Indawgyi lake, and thence followed the foot of the hills west of the lake to Kamaing. *Ficus elastica* is reported to extend from the Indawgyi lake

in latitude 25° 15′ northwards as far as the Shan States of Kampti on the Irrawaddy and north-west into Assam, but it does not appear to grow east of the Irrawaddy. In the forests examined the rubber trees were never found in compact blocks, but scattered either singly or in groups in dense evergreen forest, and it was ascertained from the Kachins that all the rubber forests are of a similar description. Countings made in the forests showed a general average of 9 trees per 100 acres, but on the Jade Mines road, from Nanyong to Numnuyang, as many as 50 trees per 100 acres were found. The more accessible forests have been overworked, and many trees have been killed by tapping the under-ground roots, but it is satisfactory to learn that in some cases the local Sawbwas have realized the fact that trees cannot be drained year after year with impunity and have established a kind of rotation, which gives them a fixed yield every year. A considerable area of the rubber forests appears to be so remote as to be practically unworkable.

Forests in the Chindwin division.

7. *The forests on the Patolôn* stream have been further examined and found to be less in extent than was previously estimated. Small teak trees exist in considerable quantities, but marketable trees are very scarce and reproduction has been generally poor. A large proportion of the area drained by this stream is devoid of teak, especially on the eastern side, where the teak forest only occupies 30 per cent. of the area.

The Kanni and South Yama forests, estimated at 100 and 60 square miles respectively, contain cutch and have consequently been brought on to Form 49.

The Lebin forest, 40 square miles, drained by a small stream flowing into the Chindwin near Kalewa, is rich in teak, and natural reproduction is reported to be very good.

The forests on the Wayè chaung, a feeder of the Myittha, have an area of 23 square miles. They were girdled over during the past season and yielded 891 trees. The forests are very dry and have been much damaged by fires.

The Tan forest, 20 square miles, on a tributary of the Myittha, is exceedingly rich in teak, but the upper part of the stream is very rocky and girdling was confined to the lower portion where 1,832 trees were obtained.

The Kyaukka forest, 50 square miles, drained by the Kyaukka, an eastern feeder of the Myittha, yielded 2,021 trees and reproduction is reported to be satisfactory.

The forests on the west side of the Yazagyo chaung drained by the Zè, Nattaga, Natuyin, Namyaung, and Manlaung streams were found to extend over about 90 square miles. On the Zè chaung teak was only found on the low-lying ground at the foot of the hills. The forest is dry and most of the mature trees are unsound. The Nattaga forest contains trees of good quality, but in the adjoining Natayin forest, which is dry, defective trees are numerous. The Namyaung and Manlaung forests were overworked before the annexation and large trees are very scarce.

Forests in the Katha division.

8. No detailed examination of new forests was possible in this division as the Divisional Officer's time was entirely taken up with settlement work, but information has been obtained regarding the *Moda forests*, 10 square miles, where there are said to be 3,000 to 4,000 girdled trees on the Thithladaw chaung drainage, as well as some 2,000 logs felled and abandoned by the late lessee on the Nampankaing chaung.

Forests in the Mandalay division.

9. The examination of the forests on the Myitngè drainage in Yatsauk and Thibaw was continued and the results confirm former reports of their overworked condition.

Forests in the Mu division.

10. *The forests on the Laga chaung*, 58 square miles, have been very heavily worked in former years, as owing to the stream draining into the Mu below the rocks timber can be brought out without much difficulty. Teak is still fairly plentiful in the Monan, Wela, and Kadet valleys, though large trees are scarce.

The Kansa forests, about 51 square miles, at the head of the Kansa stream, have been examined. Teak is generally found only along the banks of the stream, though occasionally patches are met with on the hills, which are covered with forests in which kanyin and ingyin are the principal trees. Almost all marketable teak trees have been removed.

The Seaing forest, about 10 square miles, lies immediately south of the Inga forest. Teak is not very plentiful on the hills and nearly all marketable trees near the streams have been extracted.

Forests in the Pyinmana division.

11. The examination and survey of the scattered cutch tracts east of the railway has been continued with the view of taking up small reserves suitable for plantations.

Forests in the Yaw division.

12. *Forests on the Salin and Môn chaung*, approximate area 350 square miles. These forests were partially examined; they contain both teak and cutch, but the latter is the principal tree. It does not occur evenly distributed, but in patches here and there on low steep hills, and is often accompanied by teak. Taken all round the forests have been a good deal cut over, but on the Sin and Man chaungs, feeders of the Môn, there are localities to which cutch-boilers have not yet penetrated.

The forest on the Man, a feeder of the Yaw, is very rich in cutch and contains a good deal of padauk, but little or no teak. Reproduction is said to be fairly good. The area is about 36 square miles.

The South Pindaung forest, 21 square miles. This lies between the Man forest and the proposed Pindaung reserve and contains valuable cutch and padauk forest.

Forests in the Southern Shan States.

13. *The teak forests in the Kenghkam State* consist of numerous small scattered patches, which are estimated at 12 square miles. They are of fairly moist character and fires have not been very destructive. On 365 acres of this forest the growing stock was estimated at 12,735 teak trees of all classes, but only 172 of these were fit for extraction. The same area contained 615 girdled trees and 729 stumps, which shows that the forest has been excessively overworked.

The forests in Möngpu, a sub-State of Kengtung, comprise a number of patches aggregating 4 square miles on small feeders draining directly into the Salween, and about 7 square miles of similar forests on the right bank of the Namsin river. The former, with the exception of about 1,000 acres, seems to be completely cleared of marketable trees, but reproduction has been remarkably good on the lower ground near the streams, and if protected, the forest will again become valuable. The forests on the Namsin are very dry and open, teak occurring principally on the western slopes. Marketable trees have been nearly exhausted, but young saplings are abundant.

The forests in Möngpan are at present the most productive of all in the Shan States, though they are not likely to be so for long. The principal teak tracts are on the Mèhang river and extend over an area of 50 square miles. Of this 25 square miles have been quite worked out and now yield no timber, over 10 square miles the girdled timber is at present being exploited, and the remaining 15 miles have been girdled over, but no timber has as yet been felled. The forest originally consisted almost entirely of mature trees, of which all that would repay extraction, or rather more than half, have been girdled. Owing to the intensity of the annual fires reproduction has been practically *nil* and the forest will never be worth anything again unless it can be regularly protected from fire.

2.—*Boundaries.*

Demarcation of the Ruby Mines reserves.

14. In the Katha division owing to no officer being available the demarcation of the Ruby Mines reserves could not be commenced till late in the season. The posts for the boundary marks had to be brought from a considerable distance, and this, combined with the rough nature of the ground, further retarded work, so that only 18½ miles of boundary had been finished at the close of the season. The reserves demarcated were the Yebu, Bamôn, Mogôk, and Kyatpyin reserves, but 2 miles of the latter was incomplete. The boundaries have been indicated by posts bearing galvanized iron numbers and surrounded by mounds of earth or cairns of stones at distances of about 150 yards apart, and wherever sufficiently large trees were found on the line they have been blazed and stamped with a special mark. Rupees 365-4-0 were expended on demarcation during the year under review.

15. In the Pyinmana division the whole of the external boundaries of the reserves, so far as they do not adjoin other forests proposed for reservation, have been demarcated with numbered posts and mounds 10 to 20 chains apart, and all trees on the lines have been blazed and stamped. The total length of line demarcated was 210 miles and the amount expended Rs. 3,393 or Rs. 16-2-6 per mile.

Demarcation of reserves in the Pyinmana division.

CHAPTER II.

SURVEYS, WORKING PLANS, AND ANNUAL PLANS OF OPERATIONS.

1.—General Remarks.

16. The amount of work recorded in this chapter shows a considerable decrease compared with that of the previous year. This was to be expected, as the officers in charge of the Katha, Pyinmana, and Minbu divisions were almost exclusively employed on forest settlement and demarcation, and in the Chindwin, Mandalay, and Mu divisions, in accordance with the Conservator's orders, more attention was paid to the control of girdling operation, and consequently less time could be given to survey work. The expenditure on surveys during the year was Rs. 4,906.

General remarks.

2.—Topographical Surveys.

17. The total length of line traversed with chain and plane-table or compass was 1,940 miles. The following printed maps compiled from the previous years' surveys were issued by the Forest Survey branch :—

Surveys and maps.

Maps.	Area in square miles.	Scale.
Proposed Taungdwin reserve	433	1" to the mile with silver prints 1" = 4 miles.
Proposed Nwamadaung reserve	87	
Proposed Mòn West reserve	101	
Proposed Kunzè reserve	116	
Proposed Laungtaung reserve	96	

Lithographed maps of the following were also published locally :—

Sinlin and Thaw proposed reserves.
Nampa proposed reserves.
Nabe, Wabo, Kalawpa, and Inga proposed reserves.
North Yama proposed reserves.
Ahlaw proposed reserves.
Yabe, Kyaukmigyaung, Kinmuntaung proposed reserves.
Yinmale, Ngamin, Sadôn, and Sun proposed reserves.
Kyauksit proposed reserves.
Kyaw and Pindaung proposed reserves.

18. In the Bhamo division Mr. Palmer traversed 124 miles. The officers of this division were generally out with columns to which surveyors were attached, consequently only supplementary work was done by the Forest Department.

Surveys in the Bhamo division.

19. Mr. Muriel, assisted by a ranger, completed the map of the Patolôn forest by surveying 390 square miles, and further surveys were executed in the Taungdwin valley, the total length of line traversed being 188 miles. Messrs. Thompson and Forteath surveyed the Lebin, Wayè, Kyaukka, and Tan forests, aggregating 123 square miles, and 90 square miles of the teak tracts in the Ze, Nattaga, Natuyin, Manlaung, Namyaung, Kyun, and Palatat chaungs. The length of line traversed by them was 146 miles.

Surveys in the Chindwin division.

20. Mr. Calthrop traversed 44 miles in Yatsauk and Thibaw, and Mr. Dun 222 miles in the latter State; 38 miles of traverse were carried out by Forest Ranger Maung Tun in the cutch tracts in Kyauksè and Meiktila.

Surveys in the Mandalay division.

21. In the Sidôktaya forest, 205 miles of traverse were run by the forest ranger assisted by a native surveyor, from which a map of 200 square miles of teak and cutch producing forest is being prepared.

Surveys in the Minbu division.

22. The following tracts were surveyed by Mr. Murray on the scale of 1 inch to the mile :—

Surveys in the Mu division.

	Square miles.
Laga forest ...	58
Part of Kansa forest	25
Seaing forest ...	10
Total...	93

The length of line traversed was 129 miles.

23. A plane-table survey on a scale 2 inches to the mile, showing the position of each boundary mark, was carried out at the same time as the demarcation of the reserves, and 20 miles of roads in the Yanaungmyin reserve were taken up.

Surveys in the Pyinmana division.

Surveys have also been made of the richest cutch tracts in the plains. The total length traversed was 310 miles.

24. In the Yaw, Môn, and Salin forests 200 miles were traversed, and materials obtained for the completion of a map of about 100 square miles of forest.

Surveys in the Yaw division.

25. Mr. Jackson traversed 334 miles, and has drawn up a sketch map of the trans-Salween forests in Kēngkham, Möngpu, and Möngpan.

Surveys in the Southern Shan States.

3.—*Valuation Surveys.*

26. Valuation surveys extending over 9,635 acres were executed in different divisions as follows:—

Summary of valuation surveys.

	Acres.
Bhamo division	687
Chindwin division	1,640
Mandalay division	2,788
Minbu division	104
Mu division	122
Pyinmana division	254
Yaw division	1,015
Southern Shan States	139
India-rubber forests	2,886
Total	9,635

Details will be found in Appendix C.

4.—*Working Plans and Annual Plans of Operation.*

27. Rough working plans have been framed for the Taungdwingyi and Yaw and Kyaw forests. In the former work for the next six years will be restricted to the exploitation of old girdled teak trees, and in the latter it is proposed to limit girdling to 4,000 trees during the next eight years.

Rough working plans.

With the view to obtaining reliable information regarding the rate of growth of teak and pyinkado, a sample plot of 5½ acres was demarcated in the Yanaungmyin reserve in the Pyinmana division, and the girths of selected trees were carefully measured and recorded, the measured trees being distinguished by iron numbers nailed on to them. The result of borings, made in 31 average 2nd class trees in the Pyinmana division, shows that under present conditions it takes the 2nd class tree of the smallest size 56 years to reach maturity.

Annual plans of operation were drawn up for all divisions and have been generally adhered to.

CHAPTER III.

PROTECTION AND IMPROVEMENT.

1.—*Establishment.*

Division of Upper Burma into two Circles.

28. The partition of Upper Burma into an Eastern Circle, comprising the Bhamo, Katha, Mandalay, Mu, Pyinmana, and Southern Shan States divisions, and a Western Circle, comprising the Chindwin, Yaw, and Minbu divisions, was sanctioned on the 28th March 1892, but not carried into actual effect till the 14th April following, when Mr. Aplin assumed charge of the Western Circle.

Gazetted officers.

29. Mr. J. Nisbet officiated as Conservator of the Upper Burma Circle from the 6th August to the 21st November 1891, during the absence on privilege leave of the writer of this report, who was in charge during the remainder of the year.

Mr. Slade, Deputy Conservator, proceeded on furlough on the 26th April 1891, temporarily handing over charge of the Chindwin division to Mr. Thompson, Assistant Conservator, who was relieved by Mr. Muriel on the 28th July 1891, Mr. Bruce succeeding Mr. Muriel in the charge of the Direction division. Mr. Copeland was on privilege leave from the 3rd July to the 28th August 1891, the Pyinmana division being under the charge of Mr. O'Bryen during his absence. The other divisional charges remained unaltered.

Mr. C. R. Dun, Sub-Assistant Conservator of Forests, was promoted to the class of Assistant Conservators on the 29th April 1891, and Mr. S. Carr from the Royal Engineering College, Cooper's Hill, was appointed an Assistant Conservator on the 3rd January 1892, and posted to the Pyinmana district.

Mr. Buchanan, Extra Assistant Conservator, was deputed for service in the Andamans from the 2nd November 1891, and Mr. Lane-Ryan was sent to Dehra Dun for a two years' course of study on the 29th July 1891. Mr. R. F. Lowis, a passed student of the Forest School, was appointed a probationary Extra Assistant Conservator on the 2nd May 1891.

The staff of gazetted officers in Upper Burma is much below the strength required. From December to June almost all officers are away on girdling, demarcation, or forest settlement work, and are unable during this time to exercise sufficient supervision over a great part of the forests under their charge. The revenue consequently suffers, and the rules in regard to reserved and protected trees cannot be enforced in the way they should be.

Subordinate establishment.

30. A revised scale of permanent Forest and Depôt establishment, costing Rs. 5,816 monthly, was submitted for sanction on the 13th June 1891.

The following shows the cost of the permanent and temporary Forest and Depôt establishments (including rangers) compared with that of the preceding year:—

	1890-91. Rs.	1891-92. Rs.
Permanent.		
Forest and Depôt—BIC	27,264	35,556
Temporary.		
Forest and Depôt—BIC	915	2,548
AII	1,173	...
AIII	2,695	1,391
Total ...	32,047	39,490

2.—*General Protection and Breaches of Forest Rules.*

General.

31. Several alterations and additions have been made to the Forest Rules. Rules have been added providing for the collection of revenue on jade stone and amber; a condition has been inserted in the form of cutch-license empowering Divisional Forest Officers to cancel all licenses in any camp in which undersized trees are found; and in the Pyinmana and Yamèthin districts, pyinma, pyinkado, ingyin, and thitya trees have been protected by a rule prohibiting the felling of such trees for trade purposes except in accordance with the conditions of a license prescrib-

ing that only trees previously selected and marked by a Forest Officer may be felled, a proportion of mature trees being thus retained for reproductive purposes. This rule with the addition of thitsi as a protected tree and certain other modifications was subsequently extended to the Katha, Shwebo, Ye-u, Magwe, and Minbu districts. Rules have been issued prescribing the conditions under which the tapping of India-rubber is permitted; the rules in regard to hammer-marks and sawpits have been revised and new forms of licenses prescribed; the felling of dead or girdled teak timber without a license has been prohibited in all districts of Upper Burma and in the State of Momeik, and a rule has been added empowering Deputy Commissioners to prohibit the clearing away of trees along the banks of streams.

Breaches of forest law.

32. There were 13 cases pending at the commencement of the year and 371 new cases were reported, 9 of which were undetected cases. One hundered and twenty-two cases were taken into Court: in 67 cases 199 persons were convicted and in 25 cases 40 persons were acquitted, the remaining 30 cases were undisposed of at the close of the year. The acquittals included 9 cases in which the defendants were dismissed with a warning, and 2 cases reported in previous years in which prosecution had been so long delayed that it was considered advisable not to proceed with it. The actual result is therefore 67 cases convicted and 14 acquitted, or 83 per cent. convicted. Two hundred and fifty-three cases were dealt with by Divisional Officers under section 62 of the Upper Burma Forest Regulation, and sums aggregating Rs. 3,504 accepted as compensation. Under offences compounded have been included offences in regard to cutch-boiling punished by the confiscation of the licenses, of which there were 70 in the Yaw division, 37 in the Minbu division, and 29 in the Pyinmana division.

Felling of green teak.

33. Thirty-nine cases of cutting green teak were reported, 29 of which were in the Chindwin division; the most serious offences took place in Thibaw, where 700 green trees where felled by Public Works contractors and some 1,460 trees felled or girdled by the Thibaw Sawbwa; these cases are being enquired into by the Superintendent of the Northern Shan States. From the Southern Shan States it is reported that, although the girdling of teak trees has not altogether been stopped, a considerable advance has been made in that direction. The Hsahtung Myoza, whose license was cancelled last year, has been allowed to resume work.

Working of cutch rules.

34. One hundred and seventy-two cases were in connection with cutch-boiling. The new rules in regard to cutch have worked well wherever Divisional Officers have been able to control matters themselves, but in many districts supervision had to be left entirely in the hands of native subordinates, and it is believed that many cases occurred which have not been reported.

In Pyinmana towards the close of the season, when the licenses had only a short time to run, confiscation had little deterrent effect, and numerous cases of felling undersized trees were discovered. In the Meiktila, Yamèthin, and Pyinmana districts it is a very common practice to chip the logs up in the forest without dragging them to the camp. In Pyinmana and Yamèthin the place where the chipping was done was held to be a part of the camp for the purpose of the rules, and all licenses have been confiscated in the camps to which chips of undersized trees were carried. In the Mandalay division the Deputy Conservator thought he was compelled to comply with every order to issue licenses sent him by Deputy Commissioners, and the number granted in Kyauksè and Meiktila has in consequence been much in excess of what the forests could stand. No European officer was available to look after these tracts which have suffered severely. In almost all districts at the urgent request of the Deputy Commissioners more licenses were issued than had been originally proposed in order to provide employment for people whose crops had failed. The number of licenses to be issued during the next few years will have to be greatly reduced, and in certain districts it will be necessary to prohibit boiling altogether for a time. Fortunately there are considerable areas of untouched forest in the Yaw and Chindwin divisions which will serve to keep up the supply until the exhausted tracts recover. In the Minbu division two cases of boiling *than sha* were detected and the offenders prosecuted and punished. In the Pyinmana division adulteration with

various bark extracts is reported to have been largely practised, but the detection of the offenders has not been successful. Eighteen thousand viss of adulterated cutch were seized, but eventually released, as it could not be proved that the owners were the persons who had actually manufactured the adulterants.

3.—*Forest Fires.*

Fire in Bernardmyo plantation.

35. Two fires occurred in the Bernardmyo plantation. The first was in January and was carelessly lighted by two soldiers of the Devon Regiment; the grass was very dry at the time and the fire quickly spread into the deodar and oldest *cupressus torulosa* plantations (2½ acres) which were completely destroyed; the men who caused the fire were reported to the Commanding Officer and punished by confinement to barracks. There was no gazetted officer in charge of the plantation at the time. A smaller fire occurred in February and burnt through ¼ acre of the new cypress plantation, but without doing any very serious injury.

Areas protected in Ruby Mines reserves.

36. In the Ruby Mines reserves no protection by cleared lines was attempted, but fires were put out whenever they were noticed; 6,310 acres out of 10,320 were saved in this manner. In most cases the fires were not started by the local villagers, but by Maingtha coolies cutting fuel inside the reserves. Portions of these reserves have now escaped fire for four years in succession and the improvement in growth is very marked.

Fire-protection in the Pyinmana division.

37. In the Pyinmana reserve systematic fire-protection was only attempted in the case of the Yanaungmyin reserve, where 7,040 acres out of 8,960 were successfully protected at a cost of Rs. 788, or 1 anna 9 pies per acre actually protected. A fire, caused by cultivators burning jungle to protect their own yas, occurred before the fire-trace had been completely cleared; it was discovered on the 29th February and spread over 600 acres before it could be beaten out; on the 3rd March it again got alight from some smouldering logs and burnt over another 1,100 acres. In addition to the above an area estimated at 115,200 acres escaped burning without any special measures being taken.

4.—*Natural Reproduction and Works of Improvement.*

Flowering of bamboos.

38. Dendrocalamus Hamiltonii, locally called *wabaungetsangye*, flowered last year in nearly all the forests in the Mu and Katha divisions. In portions of the Nanbyan and Nankyitha forests inspected by the Conservator, numerous teak seedlings had sprung up in the flowered areas wherever there were trees to shed seed. Thanawa bamboos have also flowered extensively in the Katha division, but not, as far as known, in any teak tracts.

Creeper-cutting.

39. In the Chindwin division all creepers found on teak trees were cut at a cost of Rs. 104 by coolies attached for this purpose to the girdling parties; elsewhere creeper-cutting was carried out by the girdling coolies without extra payment.

Improvement fellings.

40. In the Yanaungmyin reserve in the Pyinmana division the removal of trees interfering with the growth of teak and creeper-cutting was systematically carried out over an area of 6,500 acres at a cost of Rs. 145. Wherever pyinkado formed the suppressing element the trees were sold to villagers for conversion into sleepers.

5.—*Experiments and Exotics.*

Eucalyptus in the plains.

41. Eucalyptus seeds were by request supplied to the Deputy Commissioners of Minbu, Myingyan, and Meiktila, but in all cases they have been a failure. In the Bhamo division 148 plants have survived in the Forest Office, Hospital and Cantonment Gardens, the most successful species being *E. rostrata*, *E. citriodora*, and *E. punctata*. A few plants of the two first-named and *E. leptophleba* put out in the Conservator's compound at Mandalay are making good growth, the largest being 12 feet high. Those planted at Kyauksè in 1887 have all died but one, which is in an unhealthy condition. *Eucalyptus* will not live in the plains without constant care and attention.

Eucalyptus in the hills.

42. In the Katha division large numbers of seedlings were planted out at Bernardmyo and Mogôk, but the winter frosts which were unusually severe killed off the majority. At Bernardmyo, two small patches containing in all 370 plants of *E. globulus*, *E. rostrata*, and *E. leptophleba* have survived, and are fairly thriving. There are also two trees of *globulus* and one of *rostrata* now three years old, which are about 15 feet high and remarkably healthy and vigorous. At Mogôk a number of small patches of *globulus*, *rostrata*, and *leptophleba* of last year's sowings are doing moderately well; of the older sowings only five plants (*globulus*, *rostrata*, and a doubtful species) survive, and these, though they have been much cut by frost, are very healthy. At Maymyo, in the Mandalay division, the plants mentioned in paragraph 50 of last year's report continue to do well, and the largest are now 20 feet high. During the past year 3,800 plants were put out, of which the following are alive :—

E. globulus	82
E. citriodora	143
E. rostrata	228
Various kinds	262
Total ...	665

This is a very small percentage, but a long period of drought intervened immediately after the plants had been put out, and it was impossible to keep them all watered. The three species above-named have done best, the other kinds have all been more or less of a failure. In the Southern Shan States 450 young plants of *E. globulus* and *occidentalis* were raised at Taunggyi and planted out in the station and village. The station was subsequently abandoned, and more than half the plants died from want of attention during the hot weather; there are said to be now only 160 alive. At Fort Stedman 600 young plants of *E. amygdalina*, *citriodora*, *punctata*, and *corymbosa* were raised, some of which have been sent to Loikaw and others retained for planting at Fort Stedman. Seeds were also distributed to various Shan Chiefs, but the results have not yet been reported.

There is no reason why eucalyptus should not succeed as a forest tree in the hills. Circumstances have been exceptionally unfavourable during the last two years. The rainfall has been deficient, and there have been no officers available to look after the young plants at the time they require most attention. Further sowings have been made, and planting will be continued during the rains.

Other exotic forest trees.

43. The para rubber plants at Bhamo continue to thrive. As noted above, the deodar plantation at Bernardmyo was destroyed by fire; there are now only four young trees which were planted singly near the house, and they have decidedly fallen off in growth. The remaining part of the oldest *cupressus torulosa* plantation was destroyed by the same fire: 3·75 acres were planted with this species during the last rains, and the plants are all growing vigorously. The *pinus excelsa* plants that were mixed with the deodars were killed by the fire, but it is extremely improbable that they would have survived under any circumstances. This species as well as *P. gerardiana*, *abies Smithiana*, and *abies Webbiana* have all proved failures, and further attempts to cultivate them will be discontinued. The *pinus longifolia* plantations at Mogôk have suffered much from frost and injudicious weeding, which has deprived them of shelter. What remains, however, will probably eventually succeed. Blanks are being filled up with seedlings of the indigenous *P. kasya*.. The nurseries at Bernardmyo and Mogôk contain a number of seedlings of cypress, deodar, and Himalayan pines, of which only the two former will be used for plantations.

Fruit trees.

44. The following fruit trees are now growing at Bernardmyo :—

Apples	77
Pears	70
Peaches ... } Nectarines ... }	72
Plums	8
Cherries	18
Walnuts	20

Of these the walnuts are the only ones that are in a thoroughly thriving condition. The others have been treated too much like forest trees, being planted in a cold

clayey soil and not manured. Steps are being taken to remedy this. Some of tl peaches and nectarines are bearing fruit as well as a few apples. The grafts attempted last year were all a failure. A number of Himalayan walnuts and apricots have been raised from seed and are doing well. A consignment of fruit trees consisting of—

Pears ...	10
Dwarf apples	10
Dwarf plums	4
Apricots	8
Greengage	1
Peaches	2

imported from Messrs. Carter and Company of London, which the owner wished to dispose of, was purchased in Mandalay at cost price for Rs. 75. They arrived in excellent condition and with the exception of three, which were destroyed by rats, have been planted in the compound of the Maymyo Forest office.

Cost of experimental plantations.

45. The total cost of experimental plantations during the year was as follows :—

Bhamo	59
Bernardmyo	2,364
Mogôk	905
Maymyo	1,251
Total	4,579

6.—*Communications and Buildings.*

Buildings—original works.

46. The Forest office at Alôn was removed to Mônywa, the headquarters of the Lower Chindwin district, at a cost of Rs. 3,361, of which Rs. 650 were charged off in the previous year; the combined Forest office and Divisional Officers' bungalow at Katha was completed at a cost of Rs. 758, bringing up the total cost of the building to Rs. 5,569; a subdivisional bungalow and Forest office was built at Maymyo in the Mandalay division for Rs. 2,803; a Forest office, separate from the Divisional Officers' quarters was built at Minbu at a cost of Rs. 1,767, and two rest-houses were built at Ainggyi and Nganzat in the Pyinmana division for Rs. 615 each. Some depôt and guard huts were also constructed. The total cost incurred on original works during the year was Rs. 9,732, which includes cost of depôt and guard huts and other minor works.

Repairs to buildings.

47. Rupees 1,000 were spent on various repairs.

CHAPTER IV.

YIELD AND WORKING.

1.—*Girdling.*

Girdling general.

48. The girdling sanctioned for the year and that actually carried out was as follows :—

	Sanctioned trees.	Actually girdled trees.
For Messrs. The Bombay Burma Trading Corporation, Limited—		
Chindwin division...	20,000	13,497
Mandalay division...	5,000	210
Mu division	5,000	1,961
For Mr. Darwood and Ü Kawi—		
Mandalay division...	2,000	2,116
Total	32,000	17,784
Trees girdled on land to be cleared for the Railway in the Bhamo and Katha divisions		2,264
Total		20,048

In addition to the above 2,457 trees in the Mu division which had been girdled at various times by the *ex*-Sawbwa of Wuntho and 320 trees felled in yas were taken over by the department, and after being marked with the Government

hammer, placed at the disposal of the Corporation. Three hundred and ninety-seven logs, which had been felled for the *ex*-Sawbwa but not paid for, were also made over to the Corporation on the understanding that they should pay the people concerned the cost of logging. The total quantity of timber placed at the disposal of the Corporation during the year was consequently 18,125 trees and 717 felled trees or logs. The failure to girdle the full quantity proposed was due to want of trees in some of the forests taken in hand. No girdling was done for the lessee of the Mogaung forests as trees are only available in places from which it would be impossible for him to extract them before the end of his lease, but his minimum outturn has been reduced to 2,000 trees per annum. Of the trees girdled on the Railway line, 1,087 were undersized trees.

Girdling in the Chindwin division.

49. In the Chindwin division girdling operations were, at the request of Messrs. The Bombay Burma Trading Corporation, undertaken in Kalè and on the Patolôn and Taungdwin rivers, where they estimated that 12,000 and 12,700 trees respectively were available. The girdling in Kalè was carried out by Messrs. Thompson and Forteath, who started early in December and continued work till the end of May: 9,438 trees were obtained by them in Kalè and 2,900 in the forests immediately north of Kalè. The girdling on the Patolôn and Taungdwin streams was undertaken by Mr. Muriel, who, after carefully searching the forests throughout the whole season, was only able to find 1,003 trees in the Patolôn and 156 trees in the Taungdwin forest which could be girdled in accordance with Rule 8 of the Upper Burma Forest Rules.

Girdling in the Mandalay division.

50. In the Mandalay division girdling was commenced early in the season by the Divisional Officer in the Zawgyi forests and Mr. Dun in the Myitngè forests. In the former the number of trees proposed for girdling was obtained without difficulty, but in the latter Mr. Dun and the Divisional Officer, who joined him on the conclusion of the work on the Zawgyi, were only able to girdle 210 trees in all, and they report that unless new teak tracts are discovered no more trees can be girdled in these forests.

51. In the Mu division there is also a dearth of trees fit for girdling. The forests, which are easy of access, have been overworked, and those more remote contain a large proportion of over-mature and unsound trees. The whole of the forests in this division have now been girdled over, with the exception of a few tracts which could not be visited owing to scarcity of water.

2.—Timber removed by Government Agency.

Maung Bauk's lapsed logs and miscellaneous teak timber.

52. One thousand logs partly worked out by Maung Bauk, late lessee of the Upper Irrawaddy forests, were collected, and with the balance remaining on hand from the previous year, sold as follows:—

Division.		Logs.	Tons.	Sale price. Rs.
Bhamo	...	767	647	22,395
Katha	...	264	338	14,756
Mandalay	...	81	84	1,702
Minbu	...	162	214	13,948
Mu	...	265	349	14,685
Total	...	1,489	1,582	67,486

Rupees 31,509 were realized on account of the sale of 6,327 miscellaneous teak logs and scantlings measuring 1,873 tons. The above sales were all effected locally, with the exception of 162 logs from Minbu and 74 from Katha, which were sent to Rangoon. The balance of timber unsold in depôts at the close of the year was as follows:—

		Logs and pieces.
Maung Bauk's lapsed timber	...	149
Yaw lapsed timber	...	1
Confiscated timber and lapsed drifts.	Teak scantlings ...	1,550
	Teak logs ...	682
	Other woods ...	19
	Total ...	2,401

53. The remainder of the lapsed logs in the Yaw forests have been sold as they lie to Messrs. The Bombay Burma Trading Corporation, Limited, for Rs. 30 a ton, to be paid on arrival at depôt. One hundred and eighty logs, measuring 146 tons, were brought out during the year, for which Rs. 4,376 were paid.

Yaw timber.

3.—Timber removed by Lessees.

54. The agreement with Mr. Darwood for working a portion of the Shweli forests, mentioned in paragraph 64 of last year's report, was carried into effect. Under the terms of this agreement, which continues in force until the 31st March 1896, Mr. Darwood has removed certain obstructions on the Kunchaung, and will bring to depôt not less than 6,000 tons before the 31st March 1893, and 4,000 tons in each succeeding year, paying a royalty of Rs. 12 and Rs. 7-8-0 per ton respectively, on full and undersized logs for the first 5,000 logs extracted, and Rs. 15 and Rs. 9 per ton respectively on the remainder of the timber. A lease for two years has also been granted to Hadji Mahomed Hady for working out the balance of the dead timber in the Mozit forest in the Bhamo division, on payment of Rs. 12-8-0 and Rs. 7-8-0 respectively, for full and undersized logs partly worked out by the former lessee, and Rs. 10 and Rs. 6 per ton for other timber.

Agreements entered into with Mr. Darwood and Hadji Mahomed Hady.

55. The Pyaungshu boundary question has been decided in favour of the Corporation, who have now the right of working all teak forests in the Shan States on the drainage of the Myitngè.

Pyaungshu boundary.

56. The outturn from the forests in the Southern Shan States and the revenue paid by the Sawbwas for working them were as follows:—

Outturn from forests in the Southern Shan States.

	Outturn. Tons.	Revenue due for the year 1891-92. Rs.	Amount collected up to 31st March. Rs.	Balance outstanding. Rs.
Hsahtung ...	...	1,700	...	1,700
Mawkmai ...	2,082	5,450	2,000	3,450
Möngpan ...	2,621	10,900	3,000	7,900
Kēngtawng ...	2,894	...	...	...
Möngpu, Möngsut ...	1,565	10,000	1,000	9,000
Kengkham ...	811	...	...	...
Total ...	9,423	28,050	6,000	22,050*

No royalty has as yet been demanded from Kēngkham, as until recently it was not known that there were any teak forests in this State. The Kēngtawng forests are held by the Monè Sawbwa free of duty up to the end of the current year.

57. The outturn during the financial year of the forests worked by lessees is given in the following statement, which includes 632 tons sold to the Public Works Department, and 44 tons sold locally by the Corporation.

Outturn of forests worked by lessees.

Licensees.	Forests.		Teak logs.	Teak in tons.
Bombay Burma Trading Corporation, Limited.	Pyinmana ...	Full-sized ...	*20,354	25,921
		Under-sized ...	7,445	5,259
	Chindwin ...	Full-sized ...	20,404	25,489
		Under-sized ...	6,851	3,976
	Mu ...	Full-sized ...	2,641	2,772
		Under-sized ...	1,145	702
	Theingôn ...	Full-sized ...	1,475	2,042
		Under-sized ...	694	446
	Pyaungshu ...	Full-sized ...	1,180	1,612
		Under-sized ...	894	247
	Taungdwingyi ...	Full-sized ...	846	412
		Under-sized ...	71	52
	Yaw ...	Full-sized ...	18	14
		Under-sized ...	23	11
	Total Bombay Burma Trading Corporation, Limited ...		62,536	68,905

* Rs. 9,450 have been recovered since the close of the year.

Licensees.	Forests.		Teak logs.	Teak in tons.
Hadji Mahomed Hady.	Mogaung ...	Full-sized	308	403
		Under-sized	88	55
		Total Hadji Mahomed Hady ...	396	458
Messrs. Darwood and U Kawi.	Hlaingdet ...	Full-sized	687	924
		Under-sized	119	49
		Total Messrs. Darwood and U Kawi ...	806	973
Mr. Darwood	Shweli ...	Full-sized	879	1,185
		Under-sized	104	71
		Total Mr. Darwood ...	983	1,256
		GRAND TOTAL ...	64,721	71,592

The total outturn from leased forests was 46,042 tons below that of 1890-91. The Corporation brought out 42,939 tons less than in the previous year, the principal decrease being in the Pyinmana forest, which, owing to failure of the rains, only yielded 31,180 tons against 80,335 tons in 1890-91. The outturn from the Chindwin forests on the other hand was better than that of the previous year by 8,386 tons. In the Mu and Taungdwingyi forests the amount extracted during the contract year was below the stipulated minimum, but in consideration of the deficient rainfall no penalty was exacted. The lessee of the Mogaung forest only extracted 135 tons; the question of payment for shortage in his case has not yet been decided.

Distribution of outturn.

58. The distribution of outturn in the Chindwin and Pyinmana forests is shown in the following statement:—

Division.	Forests.	Logs.
Chindwin ...	Yama	91
	Thingadôn	60
	Patolôn	5,700
	Taungdwin	4,500
	Myittha river	4,300
	Nantabin, Paluswa, Nansalein	1,650
	Mawlaikgyi	1,300
	Mawku	1,900
	Makat and Kinaw	200
	Yu chaung	5,500
	Kodan	80
	Nankamu	270
	Various Kindat streams	280
	Neaped logs of previous years (various forests)	924
	Total ...	26,755
Pyinmana ...	Yeni	7,888
	Minbyin	3,610
	Yônbin	2,980
	Palwè	3,520
	Kaing	300
	Ngalaik	3,200
	Taungnyo	1,786
	Pozaungtaung	1,720
	Sinthè	1,750
	Paunglaung	1,100
	Total ...	27,799

4.—*Timber and Produce removed by Purchasers and Consumers.*

Timber removed by purchasers.

59. The following statement shows the estimated tonnage of timber on which local duty was levied and the amount paid :—

Division.	Teak.	Other reserved wood.	Unreserved wood.	Firewood brought to Mandalay.	Timber converted into charcoal.*	Revenue.
	Tons.	Tons.	Tons.	Tons.	Tons.	Rs.
Bhamo	6,421	...	1,047	...	165	39,461
Chindwin	1,290	2	6,049	...	39	12,698
Katha	13,643	32	5,590	...	1,412	80,401
Mandalay	3,973	5	3,971	22,584	2,702	29,875
Minbu	460	14	81	...	2,978	3,020
Mu	470	3	3,856	...	10	9,884
Pyinmana	1,704	8	8,830	...	242	37,341
Yaw	60	...	...	...	...	448
Shan States	...	...	...	...	...	6,000
Duty on timber exported to Lower Burma.	...	...	...	...	...	14,837
Payments made by lessees ...	...	...	...	...	...	6,72,039
Total ...	28,021	64	29,424	22,584	7,548	9,06,004

Compared with the previous year there was a decrease of 11,443 tons in the local consumption of teak. The decrease is partly owing to the higher duty now charged and partly to deficient rainfall in certain forests. Nine thousand and seven hundred tons of the teak timber on which local duty was paid was in the form of logs suitable for export to Rangoon, the remainder was small-sized stuff. The increase of 10,506 tons in timber of unreserved kinds is due to those woods being used more generally for local requirements, and to large quantities of pyinkado sleepers, both for export and local consumption, having been cut in the Katha, Mu, and Pyinmana divisions. Timber of unreserved kinds is brought from the forests almost entirely by land, and the supply was consequently not unfavourably affected by the failure of the rains. The decrease in firewood brought to Mandalay is principally due to there having been a less demand for fuel for brick-making, which was not carried on to any great extent during the year. The total quantity of timber on which local duty was collected shows a decrease of 5,974 tons, and the revenue from this source, an increase of Rs. 30,623. A comparison of results division by division is not practicable, as owing to the establishment of new revenue stations much revenue that was formerly collected at Mandalay is now taken at various stations in the Bhamo and Katha divisions.

Minor forest produce removed by purchasers.

60. The revenue from minor forest produce shows an increase of Rs. 35,711 in favour of the year, principally under cutch and rubber; the revenue from bamboos was Rs. 4,412 less than in the previous year, which is attributable to insufficient water in the floating streams. Deficient rainfall also accounts for the decreased revenue from wood-oil and varnish; the latter will not flow in dry seasons and fewer licenses were consequently taken out.

Outturn in Minor Forest Produce.

Division.	Bamboos.	Canes.	Cutch.	India-rubber.	Wood-oil and black varnish.	Resin and dammer.	Honey and wax.	Lime.	Shaw fibre.	Bark.	Cinnamon.	Miscellaneous.	Total.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Bhamo	955	336	...	1,07,364	6	64	...	...	...	...	...	.	1,08,725
Chindwin	10,380	3,134	3,280	10,963	562	16	12	...	...	...	...	..	28,356
Katha	7,655	320	1,500	...	150	117	10	12	224	...	...	18	10,006
Mandalay	7,460	72	12,020	...	28	...	4	...	...	...	...	90	19,674
Minbu	68	127	18,300	16	88	52	28	88	190	120	6	28	19,111
Mu	1,007	15	10,460	..	996	96	4	164	...	...	...	21	12,853
Pyinmana	260	...	32,540	...	502	...	12	...	188	...	...	...	33,502
Yaw	..	...	32,940	...	...	...	...	...	...	...	..	4	32,944
Total ...	27,884	4,004	1,11,040	1,18,343	2,332	345	70	264	602	120	6	161	2,65,171

Add—

Wrongly credited under IIc, firewood licenses, Katha division	4	
Wrongly credited under IIc, 1 trade license, Mu division	10	14
		2,65,185

Deduct—

Wrongly credited to Vc, 1 wood-oil and 1 dammer license, Bhamo division ...	4	
Wrongly credited to IIa, duty on thanaka barks, Mu division	21	25
Total IIc and IIe (Form 58) ...		2,65,160

Free grants of teak timber.

61. The following statement shows the estimated tonnage of dead teak timber for which free licenses were issued :—

	Tons.
Bhamo division	188
Chindwin division	652
Katha division	155
Mandalay division	123
Minbu division	862
Mu division	546
Pyinmana division	231
Yaw division	630
Total ...	3,387

5.—Drift, Waif, and Confiscated Forest Produce.

Drift operations.

62. At the commencement of the year 2,626 logs were on hand, the ownership of which had not been settled, and 3,886 additional logs were salved, making a total of 6,512 logs. Of these 1,985 were returned to owners on payment of salvage dues, 3,954 lapsed to Government, and six were lost, leaving 567 logs at depôts at the close of the year. The revenue from drift timber amounted to Rs. 35,796, and the cost of the operations, including working expenses and repairs of launches, to Rs. 15,194.

Wuntho *ex*-Sawbwa's confiscated timber.

63. Including the timber mentioned in paragraph 76 of last year's report, altogether 10,553 logs and 2,051 pieces of scantlings and slabs have been seized, of which 499 logs were in the Katha division, and the remainder in the Mu division; 5,637 logs and 501 pieces were sold for Rs. 30,907, and 459 logs were returned to various persons who proved their claim to them. Four thousand four hundred and fifty-seven logs are neaped in different parts of the Mu division, and 1,550 of scantlings are stored at Ye-u.

6.—*Summary of Outturn.*

Outturn of circle.

64. The following is a summary of the outturn of timber and revenue from minor forest produce:—

How extracted.	Teak.	Other reserved woods.	Unreserved woods.	Firewood brought to Mandalay.	Wood converted into charcoal.	Minor forest produce.
	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	Rs.
By Government agency, including drift.	255,480	...	1,363	...	...	...
By lessees	3,579,600	...	...	...	...	...
By purchasers including Shan States	1,872,200	3,292	1,471,200	1,129,200	377,398	265,171
By free grants	169,350	...	...	...	...	...
Total ...	5,876,630	3,292	1,472,563	1,129,200	377,398	265,171

7.—*Exports of Timber.*

Timber exported on payment of duty.

65. The following quantities of teak timber were exported to Lower Burma in addition to that sent down by lessees:—

	Tons.
Exported from Mandalay, logs in the round	219
Exported from Mandalay, scantlings and planks	352
Exported from Minbu, byats	122
Exported from Minbu, oar pieces	15
Exported from Pyinmana, teak cart-wheels	7
Total ...	715

the total amount of export duty realized being Rs. 14,837. Teak logs which bore marks showing that they came from unleased forests were, in certain cases, allowed to be exported to Rangoon on payment of Rs. 10 per ton in addition to the local duty.

CHAPTER V.

Financial Results.

General results.

66. The revenue and expenditure of the year compared with that of the previous three years was as follows:—

Year.	Revenue.	Expenditure.		Surplus.
	Rs.	Rs.	Rs.	Rs.
1888-89	15,79,928	A 6,33,910 B 1,51,219	7,85,129	7,94,799
1889-90	18,06,069	A 86,394 B 1,87,405	2,73,799	15,32,270
1890-91	16,44,297	A 87,191 B 2,15,124	3,02,315	13,41,982
1891-92	13,27,300	A 1,15,231 B 2,58,628	3,73,859	9,53,441

The decrease in the receipts was due to smaller quantities of timber having been extracted by lessees. Had the revenue from this source been equal to that of last year, the total receipts would have exceeded 17¾ lakhs.

Comparison with former years.

67. The receipts on account of timber collected by Government agency, chiefly lessees' lapsed logs, show an increase of Rs. 34,913 due to the sale of a large stock that was on hand at the commencement of the year, and to better prices having been realized. A smaller number of logs was collected, and the expenditure was Rs. 1,709 less than on the previous year, the total difference in favour of the year being Rs. 36,622.

The receipts from timber and forest produce worked out by purchasers were Rs. 3,76,840 and the expenditure Rs. 2,912, less than in the previous year, the total results being Rs. 3,73,928 against the year. The decrease was almost entirely under lessees' timber, which yielded Rs. 4,47,780 less than in 1890-91.

The cost of drift operations was practically the same as in the preceding year, but the revenue from this source increased by Rs. 19,383 owing to the disposal of stocks remaining unsold at the end of last year. The total receipts under head III were Rs. 45,415, but this includes an item of Rs. 9,619 realized from the sale of confiscated Wuntho timber. Under miscellaneous revenue the receipts were Rs. 4,072 less than last year, but the expenditure shows an increase of Rs. 28,198, due to the refund of Rs. 8,569 to Hadji Mahomed Hady on account of an over-payment of revenue, and Rs. 21,225 to Messrs. The Bombay Burma Trading Corporation, Limited, which had been paid as the penalty for short outturn from the Theingôn forests in 1888, and was refunded under the orders of the Government of India.

The expenditure on account of live-stock, stores, tools and plant was Rs. 4,172 more than in the previous year. Fewer elephants were bought, but a steam-launch was purchased at a cost of Rs. 9,720. Under buildings there was a small increase of Rs. 1,350, and under demarcation, improvement, and extension of forests a decrease of Rs. 868, due to the charges on account of Forest Settlement Officer's pay and allowances not having been booked during the year.

The expenditure under establishment shows an increase of Rs. 36,467, due to the promotion of officers and to the local allowances and increase in forest and office establishments sanctioned during the previous year. Under travelling allowances the expenditure has, owing to additional establishment, increased Rs. 5,014, and under contingencies there has been an increase of Rs. 2,023, chiefly on account of pay of special letter-carriers employed by Divisional Officers when in camp.

Financial results, division by division.

68. The following statement shows the revenue and expenditure of each division for the year :—

Division.	Revenue.	Expenditure.	Surplus.
	Rs.	Rs.	Rs.
Bhamo	1,73,295	40,497	1,32,798
Chindwin	3,22,323	47,467	2,74,856
Katha	1,62,770	49,708	1,13,062
Mandalay	1,24,555	78,669	45,886
Minbu	39,031	41,465	—2,434
Mu	91,823	25,807	66,016
Pyinmana	3,65,122	51,407	3,13,715
Yaw	41,947	26,973	14,974
Direction	434	...	434
Shan States	6,000	11,866	—5,866
Total ...	13,27,300	3,73,859	9,53,441

CHAPTER VI.

General Remarks.

Services of Gazetted officers.

69. The Conservator has again the pleasure of acknowledging the good work done by the gazetted officers in his circle. A great advance in forest organization has been made particularly in the Minbu, Katha, Mu, and Pyinmana divisions. The Bhamo division is still in too unsettled a condition to admit of much forest work being done, and the Chindwin and Mandalay divisions are too large for the establishment at present allotted to them. The partition of the Chindwin forests into two divisions has been sanctioned, and two additional Extra Assistant Conservators have been appointed since the close of the year, but they will be required for revenue work and the establishment is still insufficient to keep pace with girdling requirements.

70. More favourable reports have been received on the work done by rangers and subordinates on the Forest and Depôt establishments, but there is still much room for improvement. In the Katha division a forester was convicted of criminal breach of trust in respect of Government money and sentenced to 18 months' rigorous imprisonment, and a forest guard at Mogôk was convicted of extortion. In the Mandalay division a forester was convicted of a like offence. Four forest apprentices were appointed and sent to undergo a preliminary course of practical work in the Tharrawaddy division. One of them resigned from ill-health, and one at the close of the course was found not to possess sufficient knowledge of English; the remaining two have been sent to the Forest School at Dehra Dun.

Services of rangers and subordinates.

71. The work of the Conservator's office has been efficiently superintended by Mr. Johnson, and office establishments in general have worked creditably. In the Mandalay and Katha divisions two subdivisional clerks, who were concerned in the cases of extortion noted above, were convicted and imprisoned.

Office establishment.

72. The health of the department has, on the whole, been good, but Mr. O'Bryen, who was attached to the Maingkhwan column, and Messrs. Thompson and Forteath, who were in charge of the girdling at the foot of the Chin hills, as well as the subordinates with them, suffered severely from fever, and several of the latter had to resign. Girdling in the hot weather is exceedingly trying work, and it is to be regretted that paucity of establishment prevented work being brought to a close at an earlier date. In the Minbu division Forest Ranger Maung Po Thit, who had been only recently appointed, died from fever in the Sidôktaya forest, and in the Katha division the head clerk has been constantly ill with fever.

Health of the department.

73. The steam-launch *Ranger* was lent to the Military Department from the 2nd April to the 30th June 1891, after which she was employed on drift and revenue work in the Katha and Bhamo divisions. The *Thumalla* was employed on similar work in the Mandalay, Yaw, Minbu, and Chindwin divisions up to the end of the year, when she was returned to the Marine Transport Officer. A new launch called the *Forest Guard* was built at the Kidderpore Dockyard at a cost of Rs. 9,719-13-0 and has been employed in the Mandalay and Yaw divisions since the 26th January last.

Steam-launches.

74. Including three animals that had strayed away there were 42 elephants and one calf attached to the circle at the beginning of the year. Five animals which had cost Rs. 5,700 were made over to the military police who were in urgent need of them and were subsequently replaced by five other animals bought at the expense of the Police Department for Rs. 5,200. Two elephants died, two of the strayed animals were written off as lost, and five new elephants were bought for Rs. 5,275. The total number attached to the circle at the close of the year was consequently 43 elephants (including one strayed animal not yet recovered) and one calf.

Elephants.

75. Further specimens of *Quercus glauca*, *Quercus serrata*, and the species called in last year's report *Quercus semiserrata*, but now believed to be a new species, were supplied to Messrs. E. Dyer and Company of the Burma Brewery for experiment. The casks made from the two former proved useless, as the wood was too porous, and the beer oozed out. The latter species is reported to have good, straight grained wood, free of knots, very nearly resembling imported oak, and the cask made of it retained the beer well. Unfortunately this species is only known to occur over a limited area in the Ingyauk valley, near Bernardmyo, and difficulties in the way of transport render its price prohibitive.

Experiments with oaks.

76. Seeds of the following bamboos were supplied to the Government of Victoria and the Conservator, School Circle, North-Western Provinces:—

Bamboo seeds distributed.

Thaikwa (*Bambusa tulda*),
Thanawa and Wa pyu (*Dendrocalamus membranaceus*).

MANDALAY: *The 29th July 1892.*

J. W. OLIVER,
Conservator of Forests, Eastern Circle, Upper Burma.

APPENDICES.

ANNUAL FORM NO. 49 [PRESCRIBED].—*Area of Reserved, Protected, and Unclassed Forests for the year 1891-92.*

Division.	Reserve.	Civil district or territory.	Name of forest.	Area on 1st April 1891.		Added during the year.	Excluded or transferred to other heads.	Area on 31st March 1892.		No. and date of notification of addition or transfer.	Remarks.
				Acres.	Equivalent in square miles.	Acres.	Square miles.	Acres.	Equivalent in square miles.		
			Reserved Forests.								
Katha ...	.....	Ruby Mines	Ôngaing	2,880	4	...	...	2,880	4	.....	
			Bamôn	920	1	...	...	920	1	.....	
			Mogôk	560	1	...	...	560	1	.....	
			Yebu	400	1	...	...	400	1	.....	
			Peikswè	440	1	...	...	440	1	.....	
			Kyenidaung	2,000	3	...	...	2,000	3	.....	
			Bernardmyo	12,160	19	...	...	12,160	19	.....	
			Kathè	1,280	2	...	...	1,280	2	.....	
			Kyatpyin	1,840	3	...	...	1,840	3	.....	
			Total ...	22,480	35	...	...	22,480	35	.....	
Chindwin ...	.....	Upper Chindwin	Kampat	...	...	37,760	...	37,760	59	No. 241, dated 14th October 1891.	
			Matu	...	...	115,200	...	115,200	180	No. 19, dated 23rd January 1892.	
			Total ...	...	...	152,960	...	152,960	239	.....	
Pyinmana ...	.....	Pyinmana	Yanaungmyin	...	...	8,960	...	8,960	14	298	Subject to taungya privileges.
			Kaing	...	...	12,800	...	12,800	20	299	
			Palwè	...	...	83,200	...	83,200	130	300	Includes 5 square miles subject to taungya cutting privileges up to December 1896.
			Pozaungdaung	...	...	44,800	...	44,800	70	301	
			Taungnyo	...	...	64,000	...	64,000	100	302	dated 7th December 1891. Includes 44 square miles subject to taungya privileges.
			Yèni	...	...	42,240	...	42,240	66	303	
			Ngalaik	...	...	70,400	...	70,400	110	304	
			Minbyin	...	...	92,800	...	92,800	145	305	Includes 32 square miles subject to taungya privileges.
			Yônbin	...	...	83,200	...	83,200	130	306	Includes 18 square miles subject to taungya privileges.
			Total ...	...	...	502,400	...	502,400	785	...	
			Total taungya areas ...	...	...	72,320	...	72,320	113	...	
			Total areas free of taungya privileges.	22,480	35	583,040	...	605,520	946	...	
			GRAND TOTAL ...	22,480	35	655,360	...	677,840	1,059	...	

ANNUAL FORM NO. 49 [PRESCRIBED].—*Area of Reserved, Protected, and Unclassed Forests for the year 1891-92*—continued.

Division.	Range.	Civil district or territory.	Name of forest.	Area on 1st April 1891.		Added during the year.	Excluded or transferred to other heads.	Area on 1st March 1892.		No. and date of notification of addition or transfer.	Remarks.
				Acres.	Equivalent in square miles.	Square miles.	Square miles.	Acres.	Equivalent in square miles.		
						Protected Forests.					
Bhamo	Sinbo	Bhamo	Hmangin	...	41	...	...	...	41	.....	
			Nôkcho	...	8	...	...	...	8	.....	
			Mampwa	...	5	...	...	...	5	.....	
			Uya-hatha	...	24	...	...	...	24	.....	
	Mogaung	Do.	Mohnyin	...	60	10	...	...	70	.....	
			Namkwan	...	...	3	...	...	3	.....	
			Indawgyi	...	20	...	...	...	20	.....	
	Shwegu	Do.	Sinkan	...	50	...	...	...	50	.....	
			Moyu	...	10	...	...	...	10	.....	
			Nansin	...	10	...	...	...	10	.....	
			Nampa	...	30	...	...	...	30	.....	
			Kaukkwe	...	50	...	...	...	50	.....	
			Mozit	...	20	...	...	...	20	.....	
	Bhamo	Do.	Tapaing	...	20	...	...	...	20	.....	
			Molè	...	15	...	...	...	15	.....	
			Total	...	363	13	...	...	376	.....	
Chindwin	Chindwin	Upper Chindwin	Uyu	...	900	...	...	...	900	.....	Estimated.
			Namthamyit	...	100	...	...	...	100	.....	
			Sunda	...	400	...	...	...	400	.....	
			Nankamu	...	700	...	...	...	700	.....	
			Mahamyaing	...	900	...	...	...	900	.....	
			Kodan	...	900	...	...	...	900	.....	
			Upper Yu	...	55	...	...	...	55	.....	Proposed Ahlaw reserve.
			Wesalaung and Wesalun	...	60	...	...	...	60	.....	
			Proposed Yu reserve	...	210	...	...	...	210	.....	193 square miles proposed as reserve.
			Proposed Kindat reserve	...	149	...	...	...	149	.....	132 square miles proposed as reserve.
			Proposed Matu reserve	...	180	...	180	...	...	No. 19, dated 23rd January 1892.	Transferred to reserved forests.
			Proposed Kampat reserve	...	59	...	59	...	...	No. 241, dated 14th October 1891.	Transferred to reserved forests.
			Proposed Bôn reserve	...	114	...	...	...	114	.....	Forests on Sèyè, Tônbin, and Tein chaungs, area estimated.
			Proposed Taungdwin reserve	...	262	...	...	...	262	.....	
			North Taungdwin reserve	...	...	160	...	...	160	.....	
			Lebin	...	...	40	...	...	40	.....	
			Wayè	...	...	23	...	...	23	.....	
			Tan	...	...	20	...	...	20	.....	
			Kyaukka	...	...	50	...	...	50	.....	
			Yezagyo West bank	...	...	90	...	...	90	.....	

Chindwin ...	.....	Lower Chindwin	Patolôn	...	600	...	100	...	500	.....	Reduced on further examination.
			North Yama	...	140	...	...	...	140	.....	119 square miles of this proposed as reserve.
			Kabyu-Kabaing	...	400	...	...	...	400	.....	Estimated.
			Thingadôn	...	60	...	...	...	60	.....	
			Kanei	...	...	100	...	...	100	.....	Estimated.
	.....	Pakôkku	Upper Myittha and Chawhlaw	...	150	...	...	...	150	.....	
			Maw	...	200	...	...	...	200	.....	
			Bôn	...	40	...	...	...	40	.....	
			Proposed Laungtaung reserve ...	...	96	...	...	...	96	.....	
			Proposed Kunzè reserve ...	...	125	...	...	...	125	.....	116 square miles of this proposed as reserve.
			South Yama	...	...	60	...	...	60	.....	Estimated.
			Total ...	...	6,800	543	339	...	7,004	.....	
Katha ...	Meza	Katha	Petsut	...	74	...	...	...	74	.....	
			Mawhun	...	42	...	...	...	42	.....	
		Do	Meza chaung { Taung chaung / Thè chaungo ...	...	336	...	...	...	336	.....	
			North Kelat	...	8	...	...	...	8	.....	
		Do ...	Namichaung	...	12	...	...	...	12	.....	
		Do ...	Konbaung taungya ...	...	20	...	...	...	20	.....	
			East Shweli. Setkala								
			Maingtha								
			Nahan								
			Budaung								
			Thè	...	747	...	...	...	747	.....	
			Kun								
			Magyi								
			North Nampaw ...								
			South Nampaw ...								
			East Nampaw ...	...	30	...	...	...	30	.....	
	Shweli ...	Momeik	Upper Shweli. Molo	...	10	...	...	...	10	.....	
			Lwewin	...	...	...	...	...	...	.....	
			Lwekin								
			Lônsa	...	28	...	...	...	28	.....	
			Kônmawan								
			Matataung								
			Nampan chaung and feeder ...	...	6	...	...	...	6	.....	
				...	30	...	...	...	30	.....	Shown as Nampan in last year's report.
			Zingyan chaung ...	...	10	...	...	...	10	.....	
			Leti or Nanlaing	...	10	...	...	...	10	.....	
			Tadaunggwe	...	5	...	...	...	5	.....	
	Myadaung subdivision.	Myadaung	Taukta and Kogyi ...	...	10	...	...	...	10	.....	
			Hintha	...	4	... 21	...	...	25	.....	
			Zibin	...	5		...	...	5	.....	
	Ruby Mines subdivision.	Ruby Mines	Sagadaung	...	30	...	...	...	30	.....	
			Wapyudaung	...	20	...	...	...	20	.....	
			Kyaukgyi								
			Nyaungtauk	...	5	...	...	...	5	.....	
			Katha carried over ...	...	1,442	21	...	...	1,463	.....	
			Protected forest carried over ..	...	7,163	556	339	...	7,380	.....	

ANNUAL FORM NO. 49 [PRESCRIBED].—*Area of Reserved, Protected, and Unclassed Forests for the year 1891-92*—continued.

Division.	Range.	Civil district or territory.	Name of forest.	Area on 1st April 1891. Acres.	Area on 1st April 1891. Equivalent in square miles.	Added during the year. Square miles.	Excluded or transferred to other heads. Square miles.	Area on 31st March 1892. Acres.	Area on 31st March 1892. Equivalent in square miles.	No. and date of notification of addition or transfer.	Remarks.
				Protected Forests—continued.							
			Protected forests brought forward	...	7,163	556	339	...	7,380	.....	
Katha—*concld.*	Myadaung ...	Katha	Katha brought forward ...	...	1,442	21	...	...	1,463	.....	
			Pôngôn	...	10	...	...	...	10	.....	Cutch areas.
			Naunglôn								
			Shadaw								
			Kyanhnyat-Twinngè ...	...	5	...	...	...	5	.....	
			Twinngè-Thabeikyin ...	...	5	10	...	...	15	.....	
			Moda-Thithladaw forests ...	...	...	10	...	...	10	.....	Reported to contain over 2,000 teak trees girdled by Maung Bauk.
			Nattagaô-kalôn-Natin Kôbin...	...	...	40	...	...	40	.....	Protected pyinkado forests.
			Kobin	...	...	25	...	...	25	.....	
			Yedwet								
			Yeyin								
			Baingbin...								
			Magyigôn								
			Total ...	...	1,462	106	...	...	1,568		
Mandalay ...	.....	Yamèthin and Meiktila	Myittha	...	200	30	...	...	230	.....	
		Kyauksè and Yatsauk..	Panlaung	...	250	...	100	...	150	.....	
		Baw and Yatsauk ...	Zawgyi	...	20	10	...	...	30	.....	
		Mandalay ...	Myitngè	...	1,000	...	492	...	70	.....	
		Thibaw ...	Do						252	.....	
		Thônzè ...	Do						126	.....	
		Theinni ...	Do						60	.....	
		Yatsauk ...	Do	...	30	82	...	...	112	.....	
		Mandalay ...	Madaya	...	200	...	...	...	100	.....	
		Mainglôn ...	Do						100	.....	
			Total ...	...	1,700	122	592	...	1,230		
Minbu ...	Taungdwingyi ...	Magwe	Yabè	...	250	...	...	...	250	.....	These areas include proposed reserves in Minbu and Magwe.
			Kyaukmigyaung								
			Baukôn								
			Kinmuntaung								
			Ngamin								
			Sadôn	...	160	...	...	...	160	.....	
			Yinmalè								
			Sun	...	300	...	...	...	300	.....	
			Lèbu								
			Yin	...	170	...	...	...	170	.....	
			Pin								
	Sidôktaya ...	Minbu	Môn	...	960	...	...	...	960	.....	
			Man	...	200	...	...	...	200	.....	
			Salin	...	150	...	...	...	150	.....	
			Total ...	...	2,190	...	...	...	2,190		

Mu ...	.....	Ye-u	Yabin ...	...	60	...	...	...	60	.....	
			Pyaungthwè ...	...	70	...	...	...	70	.....	
			Maingwun ...	...	60	...	...	...	60	.....	
			Sareiktha ...	...	15	...	...	...	15	.....	
			Nankyitha ...	...	107	...	...	...	107	.....	
			Nanbyan ...	...	33	...	...	...	33	.....	
		Katha	Tinwa ...	...	24	...	...	...	24	.....	
			Nabè ...	...	13	...	...	...	13	.....	
			Wabo ...	...	16	...	...	...	16	.....	
			Kalawpa ...	...	8	...	...	...	8	.....	
			Nammaw (Kyundawgyi)	...	18	...	...	...	18	.....	
			Namma ...	...	32	...	...	...	32	.....	
			Nanyônga ...	...	20	...	...	...	20	.....	Estimated.
			Kansa ...	...	26	25	...	...	51	.....	
			Inga ...	...	23	...	...	...	23	.....	
			Seaing ...	...	...	10	...	...	10	.....	
			Laga ...	...	80	...	22	...	58	.....	Area taken from the map. Surveyed this season.
			Tagyaing ...	...	60	...	...	...	60	.....	
			Pyinchaung ...	...	...	6	...	...	6	.....	
			Kyaukpyu ...	...	...	4	...	...	4	.....	
			Tinwachaung ...	...	...	20	..	...	20	.....	Area estimated.
			Nammaw (Daungyo) ...	...	...	10	...	...	10	.....	
			Kin ...	...	...	15	...	...	15	.....	
			Segyinkôn ...	...	...	10	...	...	10	.....	
			Taungmaw ...	..	...	10	...	...	10	.....	
			Sinlin ...	...	48	...	...	...	48	.....	
		Shwebo	Thaw ...	...	171	...	...	...	171	.....	
			Hnetpyittaung or Sadwingyi ...	...	30	...	...	...	30	.....	
			Baw ...	...	90	...	...	...	90	.....	
			Total ...	...	1,004	110	22	...	1,092		
Pyinmana ...	Wanwegôn or Lèwè.	Pyinmana	Yeni ...	...	70	15	66*	...	19		
			Minbyin ...	...	170	...	145*	...	25		
			Yônbin ...	...	125	15	130*	...	10		
			Yanaungmyin ...	...	15	4	14*	...	5		
			Kaing ...	...	45	15	20*	...	40		
			Palwè ...	...	100	40	130*	...	10		
			Ngalaik ...	...	140	...	110*	...	30		
			Taungnyo ...	...	85	35	100*	...	20		
			Pozaungdaung ...	...	80	60	70*	...	70		
			Paunglaung ...	...	200	200	...	...	400	.....	
	Taungnyo ...		Sinthè ...	...	75	100	...	...	175†	.....	† 100 square miles lie in the Pyinmana and 75 in the Yamèthin districts.
	Yamèthin ...	Yamèthin	Myohla ...	...	20	30	...	...	50	.....	
			Shwemindin ...	...	20	40	...	...	60	.....	
			Kyinzu ...	...	20	50	...	...	70	.....	
			Hlwazin ...	...	...	40	...	...	40	.....	
			Yanaung ...	...	...	20	...	...	20	.....	
			Total ...	...	1,165	664	785	...	1,044		
Yaw ...	Kyaw ...	Pakôkku ...	Kyaw ...	...	350	...	...	...	350	.....	
	Yaw ...		Yaw ...	...	400	100	...	...	500	.....	
	Salin ...		Salin ...	...	...	200	...	...	200	.....	
	Môn ...		Môn ...	...	...	150	...	...	150	.....	
	Myingyan ...	Myingyan ...	Myingyan ...	...	...	200	...		200	.....	
			Total ...	...	750	650	...	...	1,400		
			Protected foersts Carried over...	...	15,434	2,208	1,738	...	15,904	.....	

ANNUAL FORM NO. 49 [PRESCRIBED].—*Area of Reserved, Protected, and Unclassed Forests for the year 1891-92*—concluded.

Division.	Range.	Civil district or territory.	Name of forest.	Area on 1st April 1891.		Added during the year.	Excluded or transferred to other heads.	Area on 31st March 1892.		No. and date of notification of addition or transfer.	Remarks.
				Acres.	Equivalent in square miles.	Square miles.	Square miles.	Acres.	Equivalent in square miles.		
				Protected Forests—concluded.							
			Protected forests brought forward	...	15,434	2,208	1,738	...	15,904	.....	
Shan States...	.....	Hsahtaung ...	Pawn	...	80	...	...	...	80	.....	
	.....	Mawkmè	Pawn	...	20	...	...	...	20	.....	
			Kantutong	...	40	...	...	...	40	.....	
			Teng	...	15	...	...	...	15	.....	
			West Salween	...	8	...	...	...	8	.....	
			East Salween	...	50	...	...	...	50	.....	
	.....	Möngpan	Nampan...	...	10	...	...	...	10	.....	
			Hwehawn	...	13	...	...	...	13	.....	
			West Salween	...	12	...	...	...	12	.....	
			East Salween	...	150	...	90	...	60	.....	Reduced owing to further knowledge of forest.
	.....	Kengtaung	Teng	...	70	...	...	...	70	.....	
			Nakai	...	18	...	...	...	18	.....	
			Hwelong...	...	12	...	...	...	12	.....	
			Small streams on west Salween	...	26	...	...	...	26	.....	
			Mêpa	...	8	...	...	...	8	.....	
			Hwèyè	...	18	...	...	...	18	.....	
			Small streams on east Salween	...	30	...	...	...	30	.....	
	.....	Möngpu ...	Salween	...	...	20	...	...	20	.....	
			Namsin	...	...	30	...	...	30	.....	
	.....	Möngsut	Namsin	...	...	5	...	...	5	.....	
	.....	Kenghkam... ...	.....	...	...	12	...	...	12	.....	
			Total ...	...	580	67	90	...	557		
			Total Protected Forests ...	...	16,014	2,275	1,828	...	16,461		
				Unclassed Forests.							
Katha ...	.....	Ruby Mines ...	Shwe-u-daung	...	35	...	35	...	...		Erroneously shown in last year's report. The area of unprotected forests in Upper Burma is very large and cannot be estimated.

ANNUAL FORM NO. 50 [PRESCRIBED].—*Register of Breaches of Forest Rules for the year 1891-92.*

Division.		Cases pending from 1890-91.	New cases of the year. Injury to forest by fire.	Unauthorized felling or appropriation of wood and minor forest produce.	Grazing without permission or in tracts in which grazing is prohibited.	Other offences.	Total new cases of the year.	Total cases.	Disposed of during the year. Convictions. Cases.	Convictions. Persons.	Acquittals. Cases.	Acquittals. Persons.	Total. Cases.	Total. Persons.	Cases pending at close of the year.	Remarks.
A	Bhamo	2	...	16	...	...	16	18	11	12	6	7	17	19	1	
	Chindwin	2	...	17	...	2	19	21	7	19	3	4	10	23	11	
	Katha	4	1	...	...	13	14	18	10	40	2	2	12	42	6	
	Mandalay	...	...	10	...	3	13	13	8	62	1	6	9	68	4	
	Minbu	3	...	17	...	8	25	28	23	52	3	6	26	58	2	
	Mu	2	...	...	...	1	1	3	...	...	3	3	3	3	...	
	Pyinmana	...	...	...	...	13	13	13	4	10	3	3	7	13	6	
	Yaw	...	...	8	...	...	8	8	4	4	4	9	8	13	...	
	Total A	13	1	68	...	40	109	122	67	199	25	40	92	239	30	
B	Bhamo	...	...	...	...	5	5	5	5	5	...	...	5	5	...	
	Chindwin	...	...	6	...	14	20	20	20	26	...	...	20	25	...	
	Katha	...	...	...	...	24	24	24	24	24	...	...	24	24	...	
	Mandalay	...	...	3	...	7	10	10	10	10	...	...	10	10	...	
	Minbu	...	...	9	...	...	9	9	9	48	...	...	9	48	...	
	Mu	...	...	10	...	...	10	10	10	68	...	...	10	68	...	
	Pyinmana	...	...	13	...	85	98	98	98	358	...	...	98	358*	...	*In eight of these cases the amount demanded was still unpaid at the close of the year.
	Yaw	...	...	77	...	...	77	77	77	77	...	...	77	77	...	
	Total B	...	...	118	...	135	253	253	253	616	...	...	253	616	...	
C	Chindwin	...	...	1	...	...	1	1	...	...	...	...	...	...	...	
	Katha	...	1	...	...	2	3	3	...	...	...	...	...	...	...	
	Mandalay	...	...	2	...	1	3	3	...	...	...	...	...	...	...	
	Pyinmana	...	1	...	...	1	2	2	...	...	...	...	...	...	...	
	Total C	...	2	3	...	4	9	9	...	...	...	...	...	...	...	
Total	A	13	1	68	...	40	109	122	67	199	25	40	92	239	30	
	B	...	...	118	...	135	253	253	253	616	...	...	253	616	...	
	C	...	2	3	...	4	9	9	...	...	...	...	...	...	...	
Grand Total		13	3	189	...	179	371	384	320	815	25	40	345	855	30	

N.B.—A means cases taken into Court; B cases disposed of under section 62 of the Upper Burma Forest Regulation; and C undetected cases.

ANNUAL FORM NO. 51 [PRESCRIBED].—*Area of Forest Tracts protected from Fire during the Dry Season of 1892 (to accompany report for 1891-92).*

Division.	Forest tract.	Year in which protection commenced.	Area actually protected up to 15th June 1891.	During dry season of 1892. Area attempted to be protected.	Failures.	Actually protected.	Cost during the season.	Remarks.
							Rs. A. P.	
Katha ...	Kathè reserve	1889	1,280	1,280	480	800	17 0 0	
	Kyatpyin reserve		900	1,840	240	1,600		
	Kyindaung		820	2,000	1,050	950		
	Peikswe		240	440	190	250		
	Yèbu	1891	50	400	50	350		
	Mogôk		555	560	...	560		
	Bamon	1889	545	920	320	600		
	Ongaing		1,200	2,880	1,680	1,200		
Pyinmana ...	Yeni	1890	12,800	42,240	35,840	6,400	788 0 0	
	Minbyin		16,000	92,800	73,600	19,200		
	Yônbin		16,000	83,200	70,400	12,800		
	Palwe		9,600	83,200	70,400	12,800		
	Ngalaik		19,200	70,400	57,600	12,800		
	Kaing		6,400	12,800	9,600	3,200		
	Yanaungmyin	1892	3,200	8,960	1,920	7,040		
	Taungnyo	1890	6,400	64,000	57,600	6,400		
	Pozaungtaung		9,600	44,800	38,400	6,400		
	Paunglaung	1890	...	128,000	95,000	32,000		
	Thebyn		...	41,600	38,400	3,200		
	Total ...	...	104,790	682,320	553,770	128,550	805 0 0	

ANNUAL FORM NO. 52 [PRESCRIBED].—*Area of Plantations for the year 1891-92.*

Division.	Name of plantation.	Area in acres. On 1st April 1891.	Added during the year.	Excluded during the year.	Area on 31st March 1892.	Receipts. Of the year.	Charges. Of the year.	Remarks.
	Plantations.					Rs.	Rs.	
Katha	Bernardmyo	2·5	3·75	2·5	3·75	...	1,790	
	Mogôk I (cart-road)	·75	1·5	...	2·25	...	762	
	Mogôk II (Ingyauk)	1·5	...	1·5	...	...	...	
	Total ...	4·75	5·25	4·0	6·00	...	2,552	
	Nurseries, Experiments, and Exotics.							
Katha	Bernardmyo	·25	...	...	·25	...	92	
	Mogôk	·11	...	...	·11	...	143	
Mandalay	Maymyo	·15	15	·15	15	...	1,251	
Bhamo	Bhamo	...	...	...	...	...	59	
	Total ...	·51	15	·15	15·36	...	1,545	
	Orchards.							
Katha	Bernardmyo	4	...	...	4	...	482	
	Total ...	9·26	20·25	4·15	25·36	...	4,579	

..NNUAL FORM NO. 54.—*Outturn (in cubic feet, solid) of Timber and Fuel for the year 1891-92 and Agency of Exploitation.*

Division.	Timber in the rough—Logs.					Timber in the rough—Poles.					Sawn or squared timber.					Miscellaneous.					Fuel.					Total outturn.
	Government.	Purchasers.	Free grantees.	Right-holders.	Total.	Government.	Purchasers.	Free grantees.	Right-holders.	Total.	Government.	Purchasers.	Free grantees.	Right-holders.	Total.	Government.	Purchasers.	Free grantees.	Right-holders.	Total.	Government.	Purchasers.	Free grantees.	Right-holders.	Total.	
	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.
I.—Reserved Forests.																										
Katha	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	48,800	48,800	48,800
Pyinmana	...	1,403,950	...	...	1,403,950	...	...	...	...	...	...	59,000	...	...	59,000	...	715	...	...	715	...	...	...	...	...	1,463,665
Total ...	...	1,403,950	...	...	1,403,950	...	...	...	...	...	...	59,000	...	...	59,000	...	715	...	...	715	...	...	...	48,800	48,800	1,512,465
II.—Protected Forests.																										
Bhamo	13,765	339,450	9,380	...	362,595	...	56,230	...	...	56,230	...	658	...	...	658	...	...	...	...	...	...	8,250	...	...	8,250	427,733
Chindwin	2,562	203,236	32,610	...	238,408	...	157,825	...	...	157,825	...	41,909	...	...	41,909	...	125	...	...	125	...	1,950	...	...	1,950	435,257
Katha	55,118	821,467	7,750	...	884,335	...	127,869	...	...	127,869	...	75,363	...	...	75,363	35	3,710	...	...	3,745	...	21,800	...	...	21,800	1,110,789
Mandalay	4,820	487,104	6,150	...	498,074	...	167,024	...	...	167,024	...	1,210	...	...	1,210	...	8,221	...	...	3,221	...	1,264,300	...	...	1,264,300	1,938,829
Minbu	21,411	57,379	43,080	...	121,870	...	3,800	...	...	3,800	...	3,047	...	...	3,047	...	7,802	...	...	7,802	...	148,900	...	...	148,900	285,419
Mu	143,445	187,240	27,300	...	357,985	5,530	6,540	...	...	12,070	3,302	192,186	...	...	195,488	800	980	...	...	1,780	...	498	...	...	498	567,821
Pyinmana	3,384	262,773	11,580	...	277,737	...	9,736	...	...	9,736	...	343,338	...	...	343,338	...	6,589	...	...	6,589	...	12,100	...	...	12,100	649,500
Yaw	2,671	1,418,588	31,500	...	1,452,759	...	78	...	...	78	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1,452,837
Shan States	...	471,150	...	...	471,150	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	471,150
Total ...	247,176	4,248,337	169,350	...	4,664,913	5,530	529,102	...	...	534,632	3,302	657,711	...	...	661,013	835	27,427	...	...	28,262	...	1,457,798	...	...	1,457,798	7,339,335
III.—Unclaised Forests.—Nil.																										
GRAND TOTAL ...	247,176	5,652,337	169,350	...	6,068,863	5,530	529,102	...	...	534,632	3,302	716,711	...	...	720,013	835	28,142	...	...	28,977	...	1,457,798	...	48,800	1,506,598	8,859,083

ANNUAL FORM NO. 55 [PRESCRIBED].—*Outturn of Minor Forest Produce for the year 1891-92.*

Division.	Description of produce.	Produce removed or utilized. By Government agency. Quantity.	By Government agency. Value.	By purchasers. Quantity.	By purchasers. Value.	By free grants. Quantity.	By free grants. Value.	By right-holders. Quantity.	By right-holders. Value.	Total. Quantity.	Total. Value.	Remarks.
			Rs.		Rs.		Rs.		Rs.		Rs.	
BHAMO ...	Bamboos ... ... No.	...	...	259,592	955	...	...	...	...	259,592	955	12½ per cent. *ad valorem*.
	Canes ... ... "	...	...	221,350	336	...	...	...	...	221,350	336	
	India-rubber ... ... Viss	...	...	214,716	1,07,358	...	...	...	...	214,716	1,07,358	Annas 8 per viss.
	India-rubber confiscated ... ... "	...	...	3	6	...	...	...	...	3	6	
	Thitsi ... ... "	...	...	300	6	...	...	...	...	300	6	100 viss per permit.
	Dammer ... ... "	...	...	3,200	64	...	...	...	...	3,200	64	
	Total Bhamo ...	...	...	...	1,08,725	...	...	...	...	...	1,08,725	
CHINDWIN ...	Bamboos ... ... No.	...	...	4,626,352	10,389	...	...	...	...	4,626,352	10,389	12½ per cent. *ad valorem*.
	Canes ... ... "	...	...	7,684,845	3,134	...	...	...	...	7,684,845	3,134	
	India-rubber ... ... Viss	...	...	21,927	10,963	...	...	...	...	21,927	10,963	Annas 8 per viss.
	Cutch ... ... Cauldrons	...	...	164	3,280	...	...	...	...	164	3,280	
	Thitsi ... ... Viss	...	...	20,800	416	...	...	...	...	20,800	416	100 viss per permit.
	Resin ... ... "	...	...	800	16	...	...	...	...	800	16	
	Kanyin-oil ... ... "	...	...	7,300	146	...	...	...	...	7,300	146	
	Honey and wax ... ... "	...	...	60	12	...	...	...	...	60	12	10 viss per permit.
	Total Chindwin ...	...	...	...	28,356	...	...	...	...	...	28,356	
KATHA ...	Bamboos ... ... No.	...	...	2,862,125	7,655	...	...	...	...	2,862,125	7,655	12½ per cent. *ad valorem*.
	Canes ... ... "	...	...	357,150	320	...	...	...	...	357,150	320	
	Cutch ... ... Cauldrons	...	...	75	1,500	...	...	...	...	75	1,500	
	Thitsi ... ... Viss	...	...	7,500	150	...	...	...	...	7,500	150	100 viss per permit.
	Dammer ... ... "	...	...	4,100	82	...	...	...	...	4,100	82	
	Do. ... ... "	...	...	1,340	35	...	...	...	...	1,340	35	12½ per cent. *ad valorem*.
	Shaw fibre ... ... "	...	...	11,200	224	...	...	...	...	11,200	224	100 viss per permit.
	Honey ... ... "	...	...	50	10	...	...	...	...	50	10	10 viss per permit.
	Lime stone ... ... "	...	...	600	12	...	...	...	...	600	12	100 viss per permit.
	Whet-stone ... ... "	...	...	800	16	...	...	...	...	800	16	
	Thin ... ... "	...	...	6,000	2	...	...	...	...	6,000	2	
	Total Katha ...	...	...	...	10,006	...	...	...	...	...	10,006	

MANDALAY ...	Bamboo	No.	...	...	3,536,775	7,460	...	...	...	...	3,536,775	7,460	
	Canes	"	...	...	115,450	72	...	...	...	...	115,450	72	
	Cutch	Cauldrons	...	...	601	12,020	...	...	..	...	601	12,020	
	Thitsi	Viss	...	...	1,400	28	...	..	...	...	1,400	28	
	Honey	"	...	...	20	4	...	...	...	...	20	4	
	Miscellaneous	...	...	...	...	90	...	...	...	...	...	90	
	Total Mandalay ...		...	...	...	19,674	...	...	...	...	...	19,674	
MINBU ...	Bamboos	No.	..	...	22,850	68	...	...	..	...	22,850	68	12½ per cent. *ad valorem.*
	Canes	"	..	...	90,900	127	...	...	...	...	90,900	127	
	Cutch	Cauldrons	...	...	915	18,300	...	...	...	...	915	18,300	
	India-rubber	Licenses	...	...	8	16	...	...	...	...	8	16	
	Thitsi	Viss	...	...	4,400	88	...	...	...	..	4,400	88	100 viss per permit.
	Resin	"	...	...	1,200	24	...	...	...	...	1,200	24	
	Dammer	"	...	...	1,400	28	...	...	...	...	1,400	28	
	Shaw fibre	"	...	...	9,500	190	...	...	...	...	9,500	190	
	Honey and wax	"	...	...	140	28	...	...	...	...	140	28	
	Lime stone	"	...	...	4,400	88	...	...	...	...	4,400	88	
	Barks	"	...	...	600	120	...	...	...	...	600	120	
	Thanaka	"	..	...	1,400	28	...	...	...	...	1,400	28	
	Cinnamon	License	...	...	3	6	...	...	...	...	3	6	
	Total Minbu ...		...	...	...	19,111	...	...	...	...	...	19,111	
MU ...	Bamboos	No.	...	...	368,337	1,097	...	...	...	...	368,337	1,097	12½ per cent. *ad valorem.*
	Canes	"	...	...	15,500	15	...	...	...	...	15,500	15	
	Cutch	Cauldrons	...	...	523	10,460	...	...	...	...	523	10,460	
	Thitsi	Viss	...	...	49,800	996	...	...	...	...	49,800	996	100 viss per permit.
	Resin	"	...	...	4,800	96	...	...	...	...	4,800	96	
	Lime	"	...	...	1,800	164	...	...	...	...	1,800	164	
	Honey and wax	"	...	...	20	4	...	...	...	...	20	4	10 viss per permit.
	Thanaka bark	No. of pieces	...	...	12,060	21	...	...	...	...	12,060	21	
	Total Mu ...		...	...	...	12,853	...	...	...	...	...	12,853	
PYINMANA ...	Bamboos	No.	...	...	169,905	260	...	...	...	...	169,905	260	12½ per cent. *ad valorem.*
	Cutch	Cauldrons	...	...	1,627	32,540	...	...	...	...	1,627	32,540	
	Shaw fibre	Viss	...	...	9,400	188	...	...	...	...	9,400	188	100 viss per permit.
	Thitsi	"	...	...	24,300	486	...	...	...	...	24,300	486	
	Black varnish	"	...	...	800	16	...	...	...	...	800	16	
	Honey and wax	"	...	...	60	12	...	...	...	...	60	12	10 viss per permit.
	Total Pyinmana ...		...	...	...	33,502	...	...	...	...	...	33,502	
YAW ...	Cutch	Cauldrons	...	...	1,647	32,940	...	...	...	...	1,647	32,940	
	Miscellaneous	...	...	...	...	4	...	...	...	...	...	4	
	Total Yaw ...		...	...	...	32,944	...	...	...	...	...	32,944	
	GRAND TOTAL ...		...	...	...	265,171	...	...	...	...	...	265,171	

ANNUAL FORM NO. 56 [PRESCRIBED].—*Account of Timber and other Produce cut or collected by Government Agency and brought to Sale Depôts or sold locally for the year 1891-92.*

Particulars.	Number or quantity	Cubic feet.	Total of each head. Number or quantity.	Total of each head. Cubic feet.
ACCOUNT OF GOVERNMENT TIMBER.				
In hand at commencement of the year.				
Bhamo—				
Teak	119	3,245		
Chindwin—				
Teak	165	4,601		
Katha—				
Teak (lapsed drift)	1,057	27,332		
Teak (Maung Bauk's lapsed to Government)	15	724		
Mandalay—				
Teak (lapsed drift)				
Teak from { Bhamo (Maung Bauk's lapsed to Government) 412=15,733; 586=25,815 / Katha (a) (Maung Bauk's lapsed to Government) 110= 5,289 }	1,108	46,837		
Other woods	32	507		
Mu—				
Teak	9	180(a)		
Other woods	1	20		
Pyinmana—				
Teak logs	477	4,858		
Teak sleepers	48	68		
Teak scantlings	13	22		
Yaw—				
Teak	9	351	3,053	88,743
Received in depôt during the year.				
Teak logs (lapsed drift)	3,420	89,542		
Other logs (lapsed drift)	107	1,361		
Teak logs (confiscated)	5,704	91,597		
Teak scantlings and slabs (confiscated)	2,051	4,102		
Teak logs (Maung Bauk's lapsed to Government)	1,000	57,816		
Teak logs (received from Telegraph Department)	106	930		
Teak logs (recovered Government logs that went adrift)	16	420		
Teak logs (from Yaw forests)	181	7,333		
Pyinkado logs (from Pyinmana forests)	13,683	1,026,225		
Teak logs (rejected by Bombay Burma Trading Corporation)	10	319		
Teak logs (obtained by re-measurement)	....	3,423	26,278	1,283,068
Total ...	...	...	29,331	1,371,813
Disposals during the year.				
Teak logs (sold)	12,342	300,739		
Other logs (sold)	92	920		
Teak scantlings (sold)	501	1,001		
Pyinkado logs (sold)	13,683	1,026,225		
Teak logs claimed by and transferred to Toungoo division	31	550		
Teak logs (used departmentally)	111	4,734		
Tea logs (drifted away)	49	994		
Other woods written-off as unsaleable	29	466		
Given away as free grants—				
Teak logs	31	342		
Teak sleepers	48	68		
Teak scantlings	13	22	26,930	1,336,061
Total ...	...	...	29,331	1,371,813
Balance in hand at end of the year.				
Chindwin—				
Teak	1	29		
Katha—				
Teak	553	19,282		
Maung Bauk's teak	87	5,375		
Mandalay—				
Teak	12	1,186		
Bhamo logs, teak	77	3,652		
Other woods	11	299		
Minbu—				
Teak	2	100		
Yaw log teak	1	40		
Mu—				
Teak	95	2,416		
Teak scantlings	1,550	3,101		
Other wood	8	202		
Yaw—				
Teak	4	70	2,401	35,752
Total ...	...	...	29,331	1,371,813
ACCOUNT OF DRIFT TIMBER.				
Balance at commencement of the year.				
Bhamo—				
Teak	76	2,983		
Chindwin—				
Teak	29	902		
Katha—				
Teak	81	2,430		
Mandalay—				
Teak	2	60		
Minbu—				
Teak	94	3,760		
Mu—				
Teak	2,327	60,983		
Other wood	7	182		
Yaw—				
Teak	10	471	2,626	71,771
Carried over ...	...	...	2,626	71,771

(a) Of these only 37 logs are Maung Bauk's.
(b) In last year's Form No. 56, ten teak logs were shown. It has since been found that one log is other wood.

ANNUAL FORM NO. 56 [PRESCRIBED].—*Account of Timber and other Produce cut or collected by Government Agency and brought to Sale Depôts or sold locally for the year 1891-92*—concluded.

Particulars.	Number or quantity.	Cubic feet.	Total of each head. Number or quantity.	Total of each head. Cubic feet.
ACCOUNT OF DRIFT TIMBER—concluded.				
Brought forward ...	...	...	2,626	71,771
Collected during the year.				
Bhamo—				
Teak ...	27	285		
Chindwin—				
Teak ...	463	8,509		
Other wood ...	207	1,766		
Katha—				
Teak ...	938	33,096		
Mandalay—				
Teak ...	139	3,819		
Other wood ...	8	259		
Minbu—				
Teak ...	1,311	56,588		
Mu—				
Teak ...	425	1,1050		
Yaw—				
Teak ...	368	17,852		
			3,886	133,224
Total ...	...	...	6,512	204,995
Made over to claimants.				
Teak logs...	1,985	74,747		
Transferred to Government account.				
Teak logs ...	3,420	89,543		
Other logs ...	107	1,361		
Maung Bauk's logs lapsed to Government ...	...	...		
Teak logs ...	427	28,167		
When adrift.				
Teak logs... ...	3	100		
Written-off teak boat hulls ...	3	120		
			5,945	194,037
Balance at end of the year.				
Chindwin—				
Teak ...	268	4,829		
Other wood ...	115	846		
Katha—				
Teak ...	8	240		
Minbu—				
Teak ...	34	1,360		
Mu—				
Teak ...	141	3,666		
Yaw—				
Teak ...	1	17		
			567	10,958
Total ...	...	...	6,512	204,995

ANNUAL FORM NO. 57 [PRESCRIBED].—*Abstract showing the Value of Timber and other Produce at Sale Depôts for the year 1891-92.*

Description of timber and other produce.	On hand at commencement of the year.			On hand at the close of the year.			Difference in value.		Remarks.
	Number.	Cubic feet.	Value.	Number.	Cubic feet.	Value.	In favour of the year.	Against the year.	
Government Account.			Rs.			Rs.	Rs.	Rs.	
Teak logs	2,959(a)	88,128	32,802	832	32,150	10,192	...	22,610	
Teak scantlings	13	22	15	1,550	3,101	1,000	985	...	
Teak sleepers	48	68	48	...	...	...	...	48	
Other woods	33(a)	527	32	19	501	22	—	10	
Total ...	3,053	88,745	32,897	2,401	35,752	11,214	...	21,683	

(a) In last year's Form No. 56, ten teak logs were shown in the Mu division. It has since been found that one log is other wood.

ANNUAL FORM NO. 57A. [PRESCRIBED].—*Abstract showing the Value of Timber and other Produce at Sale Depôts for the year 1891-92.*

Description of timber and other produce.	On hand at commencement of the year.			On hand at the close of the year.			Difference in value.		Remarks.
	Number.	Cubic feet.	Value.	Number.	Cubic feet.	Value.	In favour of the year.	Against the year.	
			Rs.			Rs.	Rs.	Rs.	
Live-stock	42	...	49,457	43	...	50,472	1,015	...	Does not include one calf.
Buildings	19	...	49,130	23	...	57,405	8,275	...	Number shows only building, costing over Rs. 200, but the cost of all buildings is included in the value.
Dead-stock	...	...	24,732	...	...	38,939	14,207	...	The value of buildings and dead-stock is arrived at by adding value of buildings and dead-stock acquired during the year to the value of the same in the beginning of the year less 5 per cent. of the latter account of depreciation.
Total ...	...	...	123,319	...	...	146,816	23,497	...	

ANNUAL FORM NO. 58 [PRESCRIBED].—*Summary of Revenue of the different Divisions for the year 1891-92.*

Budget head.	Direction.	Bhamo division.	Chindwin division.	Katha division.	Mandalay division.	Minbu division.	Mu division.	Pyinmana division.	Yaw division.	Total.
RECEIPTS.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
I.—TIMBER AND OTHER PRODUCE REMOVED FROM THE FORESTS BY GOVERNMENT AGENCY—										
(a) Timber ...	5,250 0 0	22,501 12 3	.....	9,505 11 1	1,702 4 9	18,324 8 10	35,974 5 1	.....	.....	93,258 10 0
(b) Firewood and charcoal	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
(c) Bamboos	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
(d) Sandal-wood	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
(e) Grass and other minor produce	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
II.—TIMBER AND OTHER PRODUCE REMOVED FROM THE FORESTS BY CONSUMERS OR PURCHASERS—										
(a) Timber ...	6,000 0 0	39,434 2 10	19,510 10 4	94,871 14 2	82,975 15 7	14,134 15 1	41,232 7 11	3,28,206 7 4	2,68,124 13 5	8,94,791 6 8
(b) Firewood and charcoal	.....	27 0 0	19 8 0	279 4 0	10,075 0 6	744 8 0	6 0 0	60 8 0	.....	11,212 12 6
(c) Bamboos	.....	955 3 0	10,388 12 0	7,655 8 4	7,460 6 8	68 8 0	1,096 9 6	259 9 6	.....	27,884 9 0
(d) Grazing and fodder grass	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
(e) Other minor produce	.....	1,07,766 0 6	17,967 2 0	2,354 7 3	12,214 2 6	19,043 8 6	11,744 8 6	33,242 0 0	32,944 0 0	2,37,275 13 3
III.—DRIFT AND WAIF WOOD AND CONFISCATED FOREST PRODUCE ...	.....	646 12 0	1,660 4 3	10,879 2 11	7,503 3 11	6,446 10 9	15,235 1 6	882 0 0	2,161 8 6	45,414 11 10
IV.—REVENUE FROM FORESTS NOT MANAGED BY GOVERNMENT—										
(a) Duty on foreign timber and other forest produce ...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
(b) Revenue from shared and private forests	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
V.—MISCELLANEOUS—										
(a) Fines and forfeitures	.....	50 7 6	109 0 0	246 15 0	518 5 9	20 0 0	.....	.....	150 0 0	1,094 12 3
(b) Refunds	42 3 10	52 5 6	6 3 6	21 8 7	0 8 0	7 14 0	11 12 0	9 8 0	0 7 0	152 6 5
(c) Other sources	391 14 9	1,861 2 3	1,260 1 0	3,072 5 8	2,103 15 9	2,339 9 0	1,086 13 0	2,461 12 5	1,637 6 5	16,215 0 3
Total ...	11,684 2 7	1,73,294 13 10	50,921 9 1	1,28,886 13 0	1,24,554 15 5	61,430 2 2	1,06,387 9 6	3,65,121 13 3	3,05,018 3 4	13,27,300 2 2

CALCUTTA:
The 20th June 1892.

J. BRIDGNELL, *Chief Superintendent,*
in charge Forest Account Branch, Comptroller-General's Office.

ANNUAL FORM NO. 58 [PRESCRIBED].—*Summary of Expenditure of the different Divisions for the year 1891-92.*

Budget head.	Direction.	Bhamo division.	Chindwin division.	Katha division.	Mandalay division.	Minbu division.	Mu division.	Pyinmana division.	Yaw division.	Total.
A.—CONSERVANCY AND WORKS.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
I.—TIMBER AND OTHER PRODUCE REMOVED FROM THE FORESTS BY GOVERNMENT AGENCY—										
(a) Timber	178 15 3	1,124 8 0	.....	422 4 0	483 8 0	525 11 0	86 1 0	.....	.....	2,820 15 3
(b) Firewood and charcoal	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
(c) Bamboos	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
(d) Sandal-wood	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
(e) Grass and other minor produce	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
II.—TIMBER AND OTHER PRODUCE REMOVED FROM THE FORESTS BY CONSUMERS.	.....	263 0 0	3,806 10 4	335 9 8	785 8 0	8 0 0	.....	786 0 6	76 14 8	6,061 11 2
III.—DRIFT AND WAIF WOOD AND CONFISCATED FOREST PRODUCE ...	866 11 11	1,279 11 0	868 0 11	2,289 8 7	5,955 1 2	2,234 2 0	482 14 0	.....	1,217 15 6	15,194 1 1
IV.—REVENUE FROM FORESTS NOT MANAGED BY GOVERNMENT—										
(a) Duty on foreign timber and other forest produce	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
(b) Revenue from shared and private forests	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
V.—RENT OF LEASED FORESTS AND PAYMENTS TO SHAREHOLDERS IN FORESTS MANAGED BY GOVERNMENT.										
VI.—LIVE-STOCK, STORES, TOOLS AND PLANT—										
(a) Purchase of cattle	5,275 0 0	.....	.....	.....	.....	.....	.....	.....	.....	5,275 0 0
(b) Feed and keep of cattle	2,550 10 10	892 2 6	1,871 5 0	1,457 9 9	1,091 8 10	1,343 1 0	767 8 0	1,525 10 9	820 15 9	12,320 8 5
(c) Purchase of stores, tools and plant	12,497 8 5	250 11 6	245 2 0	318 12 0	227 9 0	828 5 0	234 1 0	606 11 6	236 10 0	15,445 6 5
VII.—COMMUNICATIONS AND BUILDINGS—										
(a) Roads and bridges	.....	2 0 0	2 12 0	.....	.....	.....	5 0 0	6 7 0	4 0 0	20 3 0
(b) Buildings	27 9 4	419 9 11	2,977 6 3	925 15 0	2,870 2 11	2,191 15 10	36 6 0	1,251 8 0	31 0 0	10,731 9 1
(c) Other works	.....	47 6 0	52 2 0	316 11 2	540 10 3	195 7 0	.....	35 0 0	15 1 0	1,245 5 5
VIII.—DEMARCATION, IMPROVEMENT, AND EXTENSION OF FORESTS—										
(a) Demarcation	1 0 0	249 8 0	105 8 0	182 0 0	.....	98 3 6	.....	3,652 6 0	.....	4,288 9 6
(b) Compensation for land and rights	.....	.....	104 14 4	.....	.....	306 7 0	.....	189 0 0	.....	600 5 4
(c) Surveys and working plans	645 9 0	421 8 0	490 3 0	64 4 0	1,377 12 6	378 4 1	113 12 0	763 5 0	651 12 0	4,906 5 7
(d) Sowing and planting	14 13 0	58 8 0	.....	3,149 9 4	1,251 4 6	104 6 0	.....	.....	.....	4,578 8 10
(e) Protection from fire	.....	.....	.....	17 0 0	.....	.....	.....	219 0 0	.....	236 0 0
(f) Other works	.....	110 8 0	104 0 0	40 0 0	.....	.....	.....	.....	.....	254 8 0
IX.—MISCELLANEOUS—										
(a) Refunds	29,794 0 2	.....	10 0 0	352 0 0	19 4 2	120 0 0	.....	.....	300 0 0	30,605 4 4
(b) Law charges	.....	.....	.....	.....	3 0 0	.....	.....	26 4 0	.....	29 4 0
(c) Other charges	356 0 2	44 8 0	4 12 0	80 0 0	37 14 0	25 13 0	11 10 6	21 14 0	34 12 4	617 3 11
Total A.—Conservancy and Works ...	52,207 14 0	5,163 8 11	10,642 11 10	9,951 3 6	14,683 3 4	8,362 11 5	1,737 4 6	9,083 2 9	3,389 1 3	1,15,230 13 6
B.—ESTABLISHMENT.										
I.—SALARIES—										
(a) Conservators	19,391 2 3	.....	.....	.....	.....	.....	.....	.....	.....	19,391 2 3
(b) Superior officers	15,588 2 2	14,653 12 2	11,313 8 9	14,050 0 0	14,655 2 7	12,090 5 2	7,800 0 0	13,527 6 8	6,600 0 0	1,10,278 5 6
(c) Subordinate forest and depôt establishments ...	661 5 4	3,185 4 9	5,393 8 9	4,799 10 4	6,375 10 5	4,217 9 9	2,581 1 4	8,070 3 11	2,814 11 7	38,099 2 2
(d) Office establishments	10,154 3 2	2,129 5 6	3,223 10 4	3,763 1 9	4,540 1 4	2,671 11 8	1,514 10 0	2,767 15 9	1,511 3 1	32,305 14 7
(e) Deputation and special allowances	3,003 10 3	2,310 0 0	2,800 0 0	2,080 0 0	3,111 12 2	1,800 0 0	1,200 0 0	2,993 8 9	1,200 0 0	20,498 15 2
II.—TRAVELLING ALLOWANCES—										
(a) Conservators	1,955 10 0	.....	.....	.....	.....	.....	.....	.....	.....	1,955 10 0
(b) Superior officers	2,424 14 0	2,289 9 1	2,878 11 8	3,595 7 3	3,316 6 5	2,070 0 0	883 12 0	3,996 10 5	1,210 6 0	22,665 12 10
(c) Subordinate forest and depôt establishments ...	246 10 0	272 4 7	599 10 6	231 4 9	332 11 0	491 4 0	250 8 0	573 15 6	215 0 9	3,213 5 1
(d) Office establishment	942 4 9	258 9 9	409 7 1	388 3 8	347 6 0	420 3 7	175 14 3	644 2 6	232 12 0	3,828 15 7
III.—CONTINGENCIES—										
(a) Stationery	.....	.....	2 12 0	7 10 0	.....	21 10 6	6 0 9	0 2 0	1 8 0	39 11 3
(b) Carriage of tents and records	24 12 0	.....	171 5 0	143 0 0	194 12 0	11 4 6	1 0 0	140 0 0	49 12 0	735 13 6
(c) Rents, rates, and taxes	.....	45 0 0	.....	.....	48 10 0	53 7 0	.....	.....	.....	147 1 0
(d) Pay of police guards	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
(e) Official postage	570 2 6	43 7 6	84 4 6	117 0 6	146 1 6	161 1 6	66 3 0	69 8 0	68 0 0	1,325 13 0
(f) Sundries	1,643 2 11	210 2 11	502 13 4	598 0 11	733 10 1	178 7 5	117 2 0	97 6 7	61 6 4	4,142 4 6
Total B.—Establishments ...	56,605 15 4	25,407 8 3	27,379 11 11	29,773 7 2	33,802 3 6	24,187 1 1	14,626 3 4	32,881 0 1	13,964 11 9	2,59,627 14 5
GRAND TOTAL ...	1,08,813 13 4	30,571 1 2	38,022 7 9	39,734 10 8	48,485 6 10	32,549 12 6	16,363 7 10	41,964 2 10	17,353 13 0	3,73,858 11 11

CALCUTTA:
The 20th June 1892.

J. BRIDGNELL, *Chief Superintendent,*
in charge Forest Account Branch, Comptroller-General's Office.

Dr. ANNUAL FORM NO. 59 [PRESCRIBED].—*Account-Current for the year 1891-92.* **Cr.**

		Rs. A. P.	Rs. A. P.
To Cash Balance		.....	337 11 7
VIII.—Assessed Taxes—			
Income-tax deductions from salaries		.....	4,309 6 3
Revenue as per Annual Summary Form No. 58		.....	13,27,300 2 2
„ *Service Funds—*			
Civil Fund, Ordinary, Bengal		.....	.....
Civil Fund, Additional, Bengal		.....	.....
Military Fund, Bengal		.....	.....
Military Fund, Madras		.....	.....
Military Orphan Fund, Bengal		.....	.....
Uncovenanted Service Family Pension Fund, Bengal		2,018 6 0	.....
Uncovenanted Service Family Pension Fund, Bombay		127 11 0	.....
General Family Pension Fund		.....	.....
Hindu Family Annuity Fund		.....	2,146 1 0
To Deposits		.....	156 0 0
„ *Forest Cash Remittances (Local)—*			
Forest cheques drawn		3,61,826 5 2	.....
Inter-divisional transfers		7,771 1 6	3,69,597 6 8
To Advances recoverable		.....	1,29,476 3 2
„ Suspense		.....	1,608 5 4
„ *Account-current (other Governments)—*			
Remittances from Government of India		1,899 13 1	.....
Remittances from Government of Bengal		71 11 1	1,971 8 2
„ *Inter-Departmental Transfers—*			
Public Works Department, Ordinary Branches		204 2 7	.....
Military Department, Bengal	Rs. A. P. 1,121 4 8	.....	.....
Military Department, Madras	93 0 11	11,214 5 7	.....
Civil Department—			
Jail	201 0 3	.....	.....
Survey of India Department	332 6 0	.....	.....
Mathematical Instrument Department	780 12 0	.....	.....
Police	6,172 6 9	.....	.....
Miscellaneous	267 5 0	7,753 14 0	.....
Marine Department		9,719 13 11	18,892 4 1
Total ...		.....	18,55,795 0 5

		Rs. A. P.	Rs. A. P.
By Expenditure as per Annual Summary Form No. 58		.....	3,73,858 11 11
„ Deposits		.....	.....
„ *Forest Cash Remittances (Local)—*			
Remittances to treasuries...		13,10,778 6 0	.....
Inter-divisional transfers		6,332 1 0	13,17,110 7 0
„ Advances recoverable		.....	1,30,075 2 7
„ Suspense		.....	2,110 11 0
„ *Account-Current (other Governments)—*			
Remittances to the Government of India		.....	378 4 0
By Inter-Departmental Transfers—			
Public Works Department, State Railways	Rs. A. P. 10,874 0 1	.....	.....
Public Works Department, Ordinary Branches ...	13,069 15 11	23,944 0 0	.....
Military Department		.....	.....
Civil Department—			
Jail	147 11 10	.....	.....
Police	6,305 4 0	.....	.....
Miscellaneous	180 8 0	6,633 7 10	.....
Telegraph Department		102 4 0	30,679 11 10
By Cash Balance		.....	1,582 0 1
Total ...		.....	18,55,795 0 5

CALCUTTA:
The 20th June 1892.

J. BRIDGNELL, *Chief Superintendent,*
in charge Forest Account Branch, Comptroller-General's Office.

ANNUAL FORM NO. 60 [PRESCRIBED].—*Revenue received and Outstandings on account of Revenue for the year 1891-92.*

Division.	Particulars.	Outstandings at commencement of year.	Value of sales and other revenue during year.	Total.	Amount realized during year.	Balance due to the Department at end of year.	Remarks.
		Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	
Bhamo	Revenue received during 1891-92	.....	1,77,673 10 3	1,77,673 10 3	1,73,294 13 10	4,378 12 5	
Chindwin		.....	50,921 9 1	50,921 9 1	50,921 9 1	.....	
Katha		621 5 10	1,39,829 3 5	1,40,450 9 3	1,28,886 13 0	11,563 12 3	
Mandalay		.....	1,24,554 15 5	1,24,554 15 5	1,24,554 15 5	.....	
Minbu		1,810 10 0	60,387 0 11	62,197 10 11	61,430 2 2	767 8 9	
Mu		.....	1,07,007 8 7	1,07,007 8 7	1,06,387 9 6	619 15 1	
Pyinmana		.....	3,65,091 3 3	3,65,091 3 3	3,65,121 13 3	− 30 10 0	
Yaw		.....	3,05,018 3 4	3,05,018 3 4	3,05,018 3 4	.....	
Direction		....	33,734 2 7	33,734 2 7	11,684 2 7	* 22,050 0 0	
	Total ...	2,431 15 10	13,64,217 8 10	13,66,649 8 8	13,27,300 2 2	39,349 6 6	Of this sum Rs. 9,751-5-2 was recoverable from the Burma State Railway and Rs. 22,050 from Sawbwas in the Southern Shan States.

ANNUAL FORM NO. 61 [PRESCRIBED].—*Statement of Outstandings and Liabilities on account of Contractors and Disbursers for the year 1891-92.*

Division.	Department debtor.			Department creditor.			Balance due		Remarks.
	At commencement of year.	Recoveries in cash and value of supplies and work done during the year.	At close of year.	At commencement of year.	Payments made during year.	At close of year.	To department (outstandings).	By department liabilities.	
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	
Direction	.....	27,942 5 5	27,942 5 5	2,952 14 6	26,098 7 3	29,051 5 9	1,109 0 4	.....	
Bhamo	.....	8,721 1 1	8,721 1 1	645 10 0	9,371 13 3	10,017 7 3	1,296 6 2	.....	
Chindwin	.....	19,808 2 4	19,808 2 4	5,493 0 0	20,322 12 1	25,815 12 1	6,007 9 9	.....	
Katha	.....	20,307 15 10	20,307 15 10	1,659 6 11	20,624 4 0	22,283 10 11	1,976 5 7	0 10 6	
Mandalay	.....	27,939 5 0	27,939 5 0	1,546 15 6	28,857 14 5	30,404 13 11	2,465 8 11	.....	
Minbu	0 10 2	14,589 14 4	14,590 8 6	422 11 7	15,474 5 2	15,897 0 9	2,306 8 3	.....	
Mu	.....	1,616 15 0	1,616 15 0	1,464 11 0	2,032 8 0	3,497 3 0	1,880 4 0	.....	
Pyinmana	.....	8,351 12 2	8,351 12 2	2,072 12 6	7,078 4 5	9,151 0 11	799 4 9	.....	
Yaw	.....	198 12 0	198 12 0	.....	214 14 0	214 14 0	16 2 0	.....	
Total ...	0 10 2	1,29,476 3 2	1,29,476 13 4	16,258 2 0	1,30,075 2 7	1,46,333 4 7	16,857 1 9	0 10 6	

CALCUTTA:
The 20th June 1892.

J. BRIDGNELL, *Chief Superintendent,*
in charge Forest Account Branch, Comptroller-General's Office.

ANNUAL FORM NO. 62 [PRESCRIBED].—*Financial Results of Upper Burma for the year 1891-92.*

Division.	Timber and other produce removed from the forests by Government agency.		Other revenue.		Formation, protection, and improvement of forests.	Total.		Remarks.
	Receipts.	Charges.	Receipts.	Charges.	Charges.	Receipts.	Charges.	
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
Bhamo	22,502	1,608	1,50,793	19,154	19,735	1,73,295	40,497	
Chindwin	.....	.....	3,22,323	25,235	22,232	3,22,323	47,467	
Katha	43,389	952	1,19,381	22,818	25,938	1,62,770	49,708	
Mandalay	1,702	.....	1,22,853	38,411	40,258	1,24,555	78,669	
Minbu	.....	.....	39,031	20,292	21,173	39,031	41,465	
Mu	21,289	86	70,534	12,802	12,919	91,823	25,807	
Pyinmana	.....	.....	3,65,122	23,683	27,724	3,65,122	51,407	
Yaw	4,376	175	37,571	13,110	13,688	41,947	26,973	
Direction	.....	.....	434	.....	.....	434	.....	
Shan States	.....	.....	6,000	5,695	6,168	6,000	11,866	
Total ..	93,258	2,821	12,34,042	1,81,203	1,89,835	13,27,300	3,73,859	

APPENDIX A.

Statement exhibiting the cost of Feed of Elephants of the Forest Department for the year 1891-92 as compared with that of the Commissariat Department for the same period.

Division.	Number of elephants at the beginning of the year.	Number of elephants received during the year.	Casualties during the year.	Transferred to other divisions during the year.	Number at the close of the year.	Cost of feed.	Cost of keep, including gear, &c.	Cost of medicine.	Total expenditure during the year.	Average monthly cost per animal of the Forest Department.	Average monthly cost per animal of the Commissariat Department.	Amount paid by officers for carriage of elephants.	Value of labour in cash receipts and work performed.	Remarks.
						Rs.	Rs.	Rs.	Rs.	Rs. A. P.	Rs. A. P.	Rs.	Rs.	
Bhamo	5	5	...	5	5	5	887	...	892			157	...	Made over to the Police Department and replaced by new ones bought at the cost of that department.
Chindwin	7	3	1	...	9	...	1,852	19	1,871			69	...	Lost on 21st December 1889 written-off this year.
Katha	5	1	...	1	5	28	1,430	...	1,458			153	...	
Mandalay	4	3	...	4	3	12	1,069	11	1,092			188	...	
Minbu	4	2	1	...	5	...	1,268	75	1,343	23 15 3	73 7 0	307	...	
Mu	3	...	...	...	3	...	767	...	767			68	...	
Pyinmana	7	3	2	4	4	5	1,509	3	1,526			167	...	Does not include one calf born on 30th April 1890.
Yaw	3	...	...	1	2	5	818	1	822			232	...	
Direction	2	2	...	1	3	12	2,538	...	2,550			...	...	
Shan States	2	2	...	...	4							216	...	Includes one elephant astray from 4th January 1891.
Total ...	42	21	4	16	43	67	12,145	109	12,321	23 15 3	73 7 0	...	...	

APPENDIX B.

List of Buildings in the several Divisions exceeding Rs. 200 in value in the Upper Burma Forest Circle for the year 1891-92.

Division.	Number.	Names of buildings.	Station.	Rent.	Remarks.
		(a) Buildings for which rent is payable and rent.			
Bhamo	1	Combined office and dwelling	Bhamo	22	
Chindwin	2		Kindat	5	
Katha	1		Mònywa	32	
			Katha	27	
Mandalay	1		Mandalay	55	
Minbu	1		Minbu	28	
Mu	1	Dwelling	Ye-u	27½	
Pyinmana	1	Combined office and dwelling	Pyinmana	22	
Yaw	1		Pakôkku	30	
		(b) Buildings for which no rent is paid.			
Bhamo	1	Revenue station	Bhamo	...	
Katha	1	Subdivisional Forest office and bungalow ...	Tigyaing	...	
	1		Bernardmyo	...	
Mandalay	1	Subdivisional office and bungalow	Maymyo...	...	
	1	Forest office	Minbu	...	
Minbu	1	Subdivisional Forest office	Taungdwingyi	...	
Mu	1	Drift station-house	Kyaukmyaung	...	
	1	Revenue	Myinmu	...	
	1		Tôktalôk	...	
	1	Forest office	Ye-u	...	
Pyinmana	1	Subdivisional office and bungalow	Yamèthin	...	
	1	Forest rest-house	Kôntha	...	
	1	Ditto	Aingyè	...	
	1	Ditto	Ngaunzat...	...	

APPENDIX C.

Statement showing Summary of Valuation Surveys for the year 1891-92.

District.	Name of forest.	Locality.	Area in acres counted out.	Teak trees counted out. Sound green teak. I	II	III	IV	Unsound green teak. I	II	III	IV	Girdled teak. Sound.	Unsound.	Under 6 feet.	Teak stumps. Full-sized.	Under-sized.	Dead teak trees.	Cutch. Above 3 ft. girth.	Below 1 ft. 6 ins. or 3 ft. girth.	Below 1 ft. 6 ins. girth.	Stumps.	Padauk.	Remarks.
												Bhamo Division.											
Bhamo	Nampa	Zinbôn chaung	8	1	1	8	...	...	...	...	...	...	...	...	35	...	...	...	...	...	...	...	
		Mithwè	8	2	5	24	...	...	...	...	...	1	...	2	28	...	...	...	...	...	...	...	
		Makaw	11	3	6	68	...	...	...	...	...	7	...	21	47	...	...	...	...	...	...	...	
		Malimata	8	3	3	14	...	...	...	...	...	2	...	20	26	...	...	...	...	...	...	...	
		Tônpyin chaung	27	3	3	27	...	...	...	...	...	3	...	5	17	...	...	...	...	...	...	...	
		Hinsin chaung	3	5	1	8	...	...	...	...	...	2	...	1	3	...	...	...	...	...	...	...	
		Taungni	6	7	11	52	...	...	...	...	...	2	...	3	36	...	...	...	...	...	...	...	
		Kansin	8	1	12	58	...	...	...	...	...	...	...	2	18	...	...	...	...	...	...	...	
		Lonè	10	6	12	44	...	...	...	...	...	...	...	...	14	...	...	...	...	...	...	...	
		Kashin	56	8	5	32	...	...	...	...	...	1	...	4	73	...	...	...	...	...	...	...	
		Siman	16	4	1	30	...	...	...	...	...	...	...	1	71	...	...	...	...	...	...	...	
		Do	23	12	2	32	...	...	...	...	...	4	...	6	91	...	...	...	...	...	...	...	
		Nanlan	6	1	1	44	...	...	...	...	...	...	...	...	34	...	...	...	...	...	...	...	
	Sinkan	Nanlan chaung	47	10	...	200	...	...	...	...	...	...	...	17	240	...	...	...	...	...	...	...	
		Ditto	2	...	2	46	...	...	...	...	...	...	...	...	10	...	...	...	...	...	...	...	
		Walu	11	12	15	107	...	...	...	...	...	25	...	16	30	...	...	...	...	...	...	...	
		Do	2½	...	1	14	...	...	...	...	...	...	...	1	21	...	...	...	...	...	...	...	
		Do	12	13	18	27	...	...	...	...	...	18	...	6	51	...	...	...	...	...	...	...	
		Nanlan chaung	4	...	...	65	...	...	...	...	...	...	...	12	64	...	...	...	...	...	...	...	
		Munsin	9	1	2	8	...	...	...	...	...	1	...	9	47	...	...	...	...	...	...	...	
		Lwemau	8	1	2	12	...	...	...	...	...	1	...	6	...	...	...	...	...	...	...	...	
		Naiya chaung	18	36	21	27	...	...	...	...	...	13	...	8	43	...	...	...	...	...	...	...	
		Ditto ...	18	...	...	29	...	...	...	...	...	1	...	7	108	...	...	...	...	...	...	...	
		Ditto ...	20	...	...	3	...	...	...	...	...	...	...	...	44	...	...	...	...	...	...	...	
		Manthè chaung ...	10	...	...	30	...	...	...	...	...	...	...	1	48	...	...	...	...	...	...	...	
		Ditto ...	6	...	...	17	...	...	...	...	...	...	...	...	51	...	...	...	...	...	...	...	
		Nanthè	5	...	...	11	...	...	...	...	...	...	...	...	26	...	...	...	...	...	...	...	
		Taungni	3	3	2	18	...	...	...	...	...	...	...	2	22	...	...	...	...	...	...	...	
		Total ...	365½	132	125	1,055	...	...	...	...	...	81	...	150	1,298	...	...	...	...	...	...	...	
		Average per acre ...	...	·36	·35	2·89	...	...	...	...	...	·22	...	·41	3·56	...	...	...	...	...	...	...	
	Kaukkwè chaung	Yelaik chaung	5	7	6	3	...	...	...	...	...	5	...	...	49	...	...	...	...	...	...	...	
		Nansônti chaung	4	1	6	30	...	...	...	...	...	5	...	3	11	...	...	...	...	...	...	...	
		Ditto	13	9	7	4	...	...	...	...	...	24	...	6	26	...	...	...	...	...	...	...	
		Ditto	7	1	6	21	...	...	...	...	...	5	...	8	6	...	...	...	...	...	...	...	
		Ditto	2	4	4	13	...	...	...	...	...	1	...	4	50	...	...	...	...	...	...	...	
		Ditto	10	4	10	39	...	...	...	...	...	2	...	4	39	...	...	...	...	...	...	...	

		Ditto ...	...	1½	1	1	5	...	...	...	...	...	3	...	2	21	...	...	...	...	...	...	...
		Ditto ...	...	1	4	...	11	...	...	...	...	...	6	...	8	6	...	...	...	...	...	...	...
		Ditto ...	...	5½	12	4	52	...	...	...	...	...	1	...	3	26	...	...	...	...	...	...	...
		Malan chaung ...	...	5½	7	6	40	...	...	...	...	...	2	...	7	15	...	...	...	...	...	...	...
		.....		16½	18	33	106	...	...	...	...	...	7	...	9	26	...	...	...	...	...	...	...
		.....		4½	9	13	40	...	...	...	...	...	10	...	12	11	...	...	...	...	...	...	...
		Total	...	75½	77	96	364	...	...	...	...	...	71	...	66	276	...	...	...	...	...	...	...
		Average per acre	...	...	1·03	1·28	4·85	...	...	...	...	...	·95	...	·88	3·68	...	...	...	...	...	...	...
	Mozit chaung	Mozit chaung ...	...	20	...	9	42	...	...	...	...	...	4	...	1	88	...	...	...	...	...	...	...
		Ditto ...	...	12	6	19	35	...	...	...	...	...	2	...	4	55	...	...	...	...	...	...	...
		Ditto ...	...	12	12	39	76	...	...	...	...	...	4	...	23	89	...	...	...	...	...	...	...
		Ditto ...	...	32	14	41	107	...	...	...	...	...	4	...	11	119	...	...	...	...	...	...	...
		Lamuka chaung ...	...	2½	1	8	13	...	...	...	...	...	3	...	...	13	...	...	...	...	...	...	...
		Ditto ...	...	10	9	22	92	...	...	...	...	...	29	...	26	51	...	...	...	...	...	...	...
		Natman chaung ...	...	13	1	7	44	...	...	...	...	...	2	...	7	215	...	...	...	...	...	...	...
		Ditto ...	...	11	21	18	46	...	...	...	...	...	16	...	34	77	...	...	...	...	...	...	...
		Naman chaung ...	...	6	20	45	47	...	...	...	...	...	18	...	36	32	...	...	...	...	...	...	...
		Ditto ...	...	1½	14	4	3	...	...	...	...	...	2	...	2	...	...	...	...	...	...	...	...
		Maholya ...	...	2½	4	5	14	...	...	...	...	...	1	...	2	24	...	...	...	...	...	...	...
		Ditto ...	...	3	7	9	23	...	...	...	...	...	6	...	4	86	...	...	...	...	...	...	...
		Ditto ...	...	19	53	33	28	...	...	...	...	...	4	...	2	17	...	...	...	...	...	...	...
		Mozit chaung ...	...	14	5	20	55	...	...	...	...	...	5	...	14	71	...	...	...	...	...	...	...
		Total	...	158½	167	279	624	...	...	...	...	...	100	...	166	937	...	...	...	...	...	...	...
		Average per acre	...	...	1·06	1·77	3·95	...	...	...	...	...	·63	...	1·01	5·93	...	...	...	...	...	...	...
Katha ...	Mohnyin	Namhin chaung ...	...	16	5	19	39	...	...	...	...	...	...	...	3	18	...	...	...	...	...	...	...
		Ywathit ...	...	21	9	38	65	...	...	...	...	...	...	...	5	...	...	...	...	...	...	...	...
		Nyaunggaing ...	...	26	53	107	237	...	...	...	...	...	11	...	4	64	...	...	...	...	...	...	...
		Nanhala chaung ...	...	16	27	41	97	...	...	...	...	...	...	...	...	3	...	...	...	...	...	...	...
		Ywathit ...	...	9	40	54	59	...	...	...	...	...	1	...	6	22	...	...	...	...	...	...	...
		Total	...	88	134	259	497	...	...	...	...	...	12	...	18	107	...	...	...	...	...	...	...
		Average per acre	...	...	1·52	2·94	5·65	...	...	...	...	...	·14	...	·20	1·22	...	...	...	...	...	...	...
										CHINDWIN DIVISION.													
		Möndôn chaung ...	...	1·4	...	1	25	36	...	...	...	...	6	...	6	...	...	...	...	...	...	...	...
		Tôngan chaung ...	...	7·8	11	10	36	64	3	...	...	...	7	2	4	30	...	...	...	...	...	...	3
		Ditto ...	...	3·0	1	6	11	50	1	...	1	1	2	2	2	...	...	...	...	...	...	...	5
		Ditto ...	...	3·0	5	6	25	31	2	1	1	...	...	...	...	...	...	...	...	...	...	...	4
		Sadan chaung ...	...	4·4	6	...	4	13	1	...	...	...	2	...	1	3	...	...	...	...	...	...	2
		Ditto ...	...	4·2	3	1	13	26	...	1	4	...	18	1	19	7	...	...	...	...	...	...	12
		Total	...	23·8	26	24	114	220	7	2	6	1	35	5	32	40	...	...	...	...	...	...	26
Lower Chindwin.	Patolôn	Average per acre	...	...	1·09	1·01	4·79	9·24	·29	·08	·25	·04	1·47	·21	1·34	1·68	...	...	...	...	...	...	1·09
		Thapan chaung ...	...	9·6	18	19	63	61	14	3	4	5	8	2	2	2	...	...	...	...	...	...	...
		Pauktaw chaung ...	...	9·8	5	8	22	12	6	4	...	2	2	...	...	...	...	...	...	...	...	...	4
		Didikè chaung ...	...	3·8	...	9	15	12	1	2	2	1	...	...	...	2	...	...	...	...	...	...	...
		Ditto ...	...	6·0	1	8	55	59	2	1	2	4	...	...	...	...	...	...	...	...	...	...	...
		Nofigè chaung ...	...	18·6	23	29	141	121	14	8	10	8	38	1	36	15	...	...	...	...	...	...	...
		Ditto ...	...	11·0	7	32	101	37	3	1	3	1	21	...	16	4	...	...	...	...	...	...	...
		Nabwè chaung ...	...	17·6	23	16	60	25	5	4	2	1	7	...	1	...	...	...	...	...	...	...	...
		Total	...	76·4	77	121	458	327	45	23	23	22	76	3	55	23	...	...	...	...	...	...	4
		Average per acre	...	...	1·01	1·58	5·99	4·28	·59	·30	·30	·29	·99	·04	·72	·30	...	...	...	...	...	...	·05

70 per cent. is under Indaing countings, confined to teak-producing area. Regeneration absent except in Sadan chaung, where some scanty patches are seen.

60 per cent. of which area is now productive of teak. Countings confined to teak-producing area. Regeneration slight.

Statement showing Summary of Valuation Surveys for the year 1891-92—continued.

District.	Name of forest.	Locality.	Area in acres counted out.	Teak trees counted out. Sound green teak. I	II	III	IV	Unsound green teak. I	II	III	IV	Girdled teak. Sound.	Unsound.	Under 6 feet.	Teak stumps. Full-sized.	Under-sized.	Dead teak trees.	Cutch. About 3 feet girth.	Between 1 ft. 6 ins. and 3 ft. girth.	Below 1 ft. 6 ins. girth.	Stumps.	Padauk.	Remarks.
				Chindwin Division—continued.																			
Lower Chindwin.	Patolôn	Lema chaung ...	1·4	10	2	2	...	...	1	...	...	3	...	...	...	...	...	...	...	...	...	...	Teak confined to an area of about 1 square mile. Regeneration absent except close to the stream.
		South bank ...	9·0	4	6	12	8	5	...	1	...	21	1	8	7	...	...	...	...	...	...	...	
		Total ...	10·4	14	8	14	8	5	1	1	...	24	1	8	7	...	...	...	...	...	...	...	
		Average per acre ..	...	1·35	·77	1·35	·77	·48	·10	·10	...	2·31	·10	·77	·67	...	...	...	...	...	...	...	
		Petpa chaung ... West bank ...	18·2	39	22	51	49	13	4	2	...	13	...	4	...	...	...	...	...	...	...	...	60 per cent. of whole area is teak-producing. Countings confined to teak areas. Regeneration fair on the upper slopes.
			5·8	13	6	6	13	19	8	...	...	11	...	...	...	...	...	...	...	...	...	...	
			2·0	1	3	20	4	...	2	4	—	5	...	3	...	...	...	...	...	...	...	...	
			14·0	62	17	25	9	9	8	...	...	34	1	8	...	...	...	...	...	...	...	...	
			6·0	13	14	20	29	5	8	4	...	41	4	18	...	...	...	...	...	...	...	...	
			9·4	23	11	33	35	1	3	...	1	17	1	7	...	...	...	...	...	...	...	...	
			4·4	8	2	3	2	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
			8·6	9	11	33	7	...	...	1	...	11	...	3	...	...	...	...	...	...	...	...	
		Total ...	68·4	168	86	191	148	51	33	11	1	132	6	43	...	...	...	...	...	...	...	...	
		Average per acre ...	...	2·46	1·26	3·79	2·16	·74	·48	·16	·01	1·93	·09	·63	...	...	...	...	...	...	...	...	
		Petpa chaung ... East bank	4·0	18	3	1	...	5	5	...	...	...	...	...	...	...	...	...	...	...	...	...	Only 20 per cent. of whole area teak-producing. Teak occurs in patches surrounded by indaing. Regeneration generally absent.
			3·6	22	6	7	3	3	1	...	...	...	...	...	...	...	...	...	...	...	...	...	
		.....	6·4	25	6	7	2	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
		.....	3·0	15	5	4	2	2	...	1	...	...	...	...	...	...	...	...	...	...	...	...	
		Total ...	17·0	80	20	19	7	12	6	1	...	...	...	...	...	...	...	...	...	...	...	...	
		Average per acre ...	...	4·71	1·18	1·12	·41	·71	·35	0·6	...	...	...	...	...	...	...	...	...	...	...	...	
		Lèdaung chaung ... West bank	9·4	26	27	58	44	2	...	1	...	3	2	1	...	...	...	...	...	...	...	...	60 per cent. of whole area is now productive of teak. Regeneration fair. Countings confined to teak area.
			6·6	3	9	93	166	3	...	...	...	8	2	1	...	...	...	...	...	...	...	...	
		.....	4·2	2	12	61	36	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	
		Total ...	20·2	31	48	212	246	5	2	1	...	11	4	2	...	...	...	...	...	...	...	...	N.B.—Forest east of Lèdaung chaung is entirely now productive of teak.
		Average per acre ...	...	1·53	2·37	10·50	12·18	·25	·10	·05	...	·54	·20	·10	...	...	...	...	...	...	...	...	

Upper Chindwin.	Taungdwin	Tein chaung	11·0	5	8	39	5	...	1	...	...	15	...	14	27	...	...	...	...	...	...	...	Regeneration of teak entirely absent
		.....	29·4	45	29	78	35	30	10	1	...	4	1	5	13	...	...	...	...	...	...	...	Very dry forest. Teak-producing
		.....	14·8	13	18	37	7	4	3	...	...	3	...	2	...	...	...	...	...	...	...	...	area 40 per cent. of its area.
		Total ...	55·2	63	55	154	47	34	14	1	...	22	1	21	40	...	...	...	...	..	...	...	
		Average per acre ...	...	1·14	1·00	2·79	·85	·62	·25	·02	...	·40	·02	·38	·72	...	...	...	...	...	...	...	
		Tônbin chaung	14·4	30	13	23	9	3	...	1	...	...	...	...	5	...	...	...	...	...	...	...	Teak confined to two small strips.
		Average per acre ...	...	2·08	·90	1·60	·62	·21	...	·07	...	...	...	...	·35	...	...	...	...	...	...	...	
		Hmôktha chaung	3·6	...	...	21	8	...	...	...	...	2	...	2	14	...	...	...	...	...	...	...	Very dry forest with small teak scattered among indaing.
		Average per acre ...	...	...	...	5·83	2·22	...	...	...	...	·56	...	·56	3·89	...	...	...	...	...	...	...	
Lower Chindwin.	.....	Sapogyi	18	...	...	...	...	...	...	...	...	...	...	...	...	.	...	23	48	...	32	...	
		Myaungkin chaung	26·6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	65	38	...	75	...	
		Nyaungbinlè	96·4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	280	223	...	...	...	
		Total ...	141	...	...	...	...	...	...	...	...	...	...	...	...	...	...	368	309	...	107	...	
		Average per acre ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2·61	2·19	...	·75	...	
Upper Chindwin.	Lebin	Lebin chaung	66	58	19	11	63	3	...	...	...	12	4	...	15	...	...	...	...	...	...	...	
		.....	48	16	12	27	39	9	...	...	...	8	...	3	2	...	...	...	...	...	...	...	
		.....	36	20	3	4	12	1	...	...	...	2	...	...	4	...	...	...	...	...	...	...	
		.....	53	16	3	6	14	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
		.....	47	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
		Total ...	250	111	37	48	128	14	...	...	...	22	4	3	21	...	...	...	...	...	...	...	
		Average per acre ...	...	·45	·15	·19	·51	·06	...	...	...	·09	·02	·01	·08	...	...	...	...	...	...	...	
	Wayè	Wayè chaung	50	60	33	31	107	13	9	4	...	9	5	13	35	...	...	...	...	...	...	...	
		.....	40	43	18	24	14	8	2	1	...	6	1	3	41	...	...	...	...	...	...	...	
		Total ...	90	103	51	55	121	21	11	5	...	15	6	16	76	...	...	...	...	...	...	...	
		Average per acre ...	...	1·14	·57	·61	1·34	·23	·12	·06	...	·17	·07	·18	·84	...	...	...	...	...	...	...	
	Kyaukka	Kyaukka chaung	17	59	19	41	64	48	11	26	...	10	...	...	18	...	...	...	...	...	...	...	
		.....	42	59	15	8	14	30	9	5	...	1	...	...	25	...	...	...	...	...	...	...	
		.....	50	53	32	35	40	18	10	2	...	23	4	3	14	...	...	...	...	...	...	...	
		.....	44	65	20	21	36	10	10	3	...	33	5	12	9	...	...	...	...	...	...	...	
		.....	32	61	8	9	32	26	13	2	...	5	...	...	17	...	...	...	...	...	...	...	
		Total ...	185	297	94	114	186	132	53	38	...	72	9	15	83	...	...	...	...	...	...	...	
		Average per acre ...	...	1·61	·51	·62	1·01	·71	·29	·21	...	·39	·05	·08	·45	...	...	...	...	...	...	...	
	Tan	Tan chaung	47	70	35	66	85	38	13	13	...	10	...	...	12	...	...	...	...	...	...	...	
		.....	34	18	7	12	9	1	...	...	...	3	...	...	2	...	...	...	...	...	...	...	
		.....	50	65	32	51	68	23	7	11	...	13	...	...	9	...	...	...	...	...	...	...	
		Total ...	131	153	74	129	162	62	20	24	...	26	...	...	23	...	...	...	...	...	...	...	
	Yezagyo ...	Average per acre ...	...	1·17	·56	·98	1·24	·47	·15	·18	...	·20	...	...	·18	...	...	...	...	...	...	...	
		Zè north	43	30	24	49	47	8	10	2	...	9	...	59	42	...	...	...	...	...	...	...	
		Average per acre ...	...	·70	·56	1·14	1·10	·19	·23	·05	...	·21	...	1·37	·98	...	...	...	...	...	...	...	

Statement showing Summary of Valuation Surveys for the year 1891-92—continued.

District.	Name of forest.	Locality.	Area in acres counted out.	Teak trees counted out. Sound green teak. I	II	III	IV	Unsound green teak. I	II	III	IV	Girdled teak. Sound.	Unsound.	Under 6 feet.	Teak stumps. Full-sized.	Under-sized.	Dead teak trees.	Cutch. Above 3 feet girth.	Between 1 ft. 6 ins. and 3 feet girth.	Below 1 ft. 6 ins. girth.	Stumps.	Padauk.	Remarks.
												Chindwin Division—continued.											
Upper Chindwin	Yezagyo ...	Nattaga	30	18	24	80	260	9	1	...	...	2	...	...	55	...	...	...	...	...	...	...	
		.....	56	65	20	82	203	5	7	3	...	9	...	57	63	...	...	...	...	...	...	...	
		.....	48	35	21	29	24	11	9	6	...	...	...	...	...	...	...	...	...	...	...	...	
		Total ...	134	118	65	191	487	25	17	9	...	11	...	57	118	...	...	...	...	...	...	...	
		Average per acre ...	...	·88	·49	1·42	3·63	·19	·13	·07	...	·08	...	·43	·88	...	...	...	...	...	...	...	
	Yezagyo ...	Namyaung	64	50	32	65	62	42	20	12	...	15	3	76	138	...	...	...	...	...	...	...	
		Average per acre ...	...	·78	·50	1·02	·97	·66	·31	·19	...	·23	·05	1·19	2·16	...	...	...	...	...	...	...	
	Yezagyo ...	Pyaungbôk	42	83	42	37	71	9	7	4	...	...	...	...	7	...	...	...	...	...	...	...	
		Average per acre ...	...	1·97	1·00	·88	1·69	·21	·17	·10	...	...	...	...	·17	...	...	...	...	...	...	...	
	...	Paluswa chaung	46	63	35	27	64	7	3	8	...	31	4	...	92	...	...	...	...	...	...	...	
		.....	50	35	30	17	19	10	12	3	...	51	11	8	40	...	...	...	...	...	...	...	
		.....	40	75	38	50	80	15	10	4	...	13	2	3	42	...	...	...	...	...	...	...	
		.....	45	39	28	20	9	8	5	5	...	15	3	4	19	...	...	...	...	...	...	...	
		Total ...	181	212	131	114	172	40	30	20	...	110	20	15	193	...	...	...	...	...	...	...	
		Average per acre ...	...	1·17	·72	·63	·95	·22	·17	·11	...	·61	·11	·08	1·07	...	...	...	...	...	...	...	
	...	Nanzalin chaung	42	31	12	9	8	4	4	2	...	6	1	3	53	...	...	...	...	...	...	...	
		Average per acre ...	...	·74	·29	·21	·19	·10	·10	·05	...	·14	·02	·07	1·26	...	...	...	...	...	...	...	
	...	Nankhawpat chaung	48	73	42	77	84	7	9	18	...	7	...	...	9	...	...	...	...	...	...	...	
		Average per acre ...	...	1·52	·87	1·60	1·75	·15	·19	·37	...	·15	...	...	·19	...	...	...	...	...	...	...	

Mandalay Division.

Thibaw	Kong Mong	.....	70	1	8	34	141	7	2	10	179	19	13	2	18	...	...	...	...	...	...	...
		Average per acre	...	·01	11	·49	2·01	·10	·03	·14	2·56	·27	·19	·03	·26	...	...	...	...	...	...	...
					2·62				2·83				·59									
	Palam	.....	124	6	21	58	425	18	29	39	333	16	7	2	44	...	...	...	...	...	...	...
		Average per acre	...	·05	·17	0·47	3·42	·15	·23	·31	2·60	·13	·06	·02	·35	...	...	...	...	...	...	...
Theinni	Seen	.....	48	9	4·11 10	20	150	18	3·29 11	23	143	1	0·20 2	8	39	...	...	...	...	...	...	...
		Average per acre	...	0·19	0·21	0·42	3·12	0·37	0·23	0·48	2·98	·02	·04	0·17	0·81	...	...	...	...	...	...	...
Thibaw	Puka	.....	112	11	3·94 24	40	247	9	4·06 17	22	127	11	0·23 13	8	30	...	...	...	...	...	...	...
		Average per acre	...	0·10	0·21	0·36	2·21	0·08	0·15	0·20	1·13	0·10	0·12	0·07	0·27	...	...	...	...	...	...	...
Theinni	Kônnyu	.....	38	...	2·87 4	39	163	3	1·54 2	19	83	...	0·29 1	...	10	...	...	...	...	...	...	...
		Average per acre	...	...	0·11	1·03	4·29	0·08	0·05	0·50	2·18	...	·03	...	0·26	...	...	...	...	...	...	...
Thibaw	Tamwan	.....	66	29	5·42 25	67	220	28	2·82 13	40	124	32	·03 11	13	21	...	...	...	...	...	...	...
		Average per acre	...	0·44	0·38	1·02	3·33	0·42	0·20	0·61	1·88	0·48	0·17	0·20	0·32	...	...	...	...	...	...	...
Theinni	Kônnyu	.....	8	1	5·17 1	6	33	1	3·11 2	5	14	...	0·85 ...	...	...	...	...	...	...	...	...	...
		Average per acre	...	0·12	0·12	0·75	4·12	0·12	0·25	0·62	1·75	...	...	...	...	...	...	...	...	...	...	...
Thibaw	Palam	.....	54	1	5·12 1	17	134	1	2·75 ...	21	91	2	1	...	11	...	...	...	...	...	...	...
		Average per acre	...	·02	·02	0·31	2·48	·02	...	0·39	1·69	·04	·02	...	0·20	...	...	...	...	...	...	...
	Hewpaha	.....	74	3	2·83 5	18	101	10	2·09 7	27	232	4	·06 7	6	10	...	...	...	...	...	...	...
		Average per acre	...	·04	0·07	0·24	1·36	0·14	0·09	0·36	3·14	0·05	0·09	0·08	0·14	...	...	...	...	...	...	...
	Nanpa	.....	92	9	1·72 4	7	89	22	3·73 11	16	141	10	0·23 8	17	46	...	...	...	...	...	...	6
		Average per acre	...	0·10	·04	0·08	·97	0·24	0·12	0·11	1·53	0·11	0·09	0·18	0·50	...	...	...	...	...	...	·07
	Ônkôk	.....	123	15	1·18 15	46	719	14	2·00 18	21	362	14	0·38 6	3	19	...	...	...	...	...	...	20
		Average per acre	...	0·12	0·12	0·37	5·85	0·11	0·15	0·17	2·94	0·11	0·05	·02	0·15	...	...	...	...	...	...	·16
	Talôn	.....	136	17	6·46 21	40	367	16	3·37 15	35	189	11	0·19 9	6	8	...	...	...	...	...	...	·15
		Average per acre	...	0·12	0·15	0·29	2·70	0·12	0·11	0·26	1·39	0·08	0·07	·04	0·06	...	...	...	...	...	...	·11
	Hinleng	.....	42	1	3·27 1	...	10	2	1·87 ...	1	22	2	0·19 1	...	2	...	...	...	...	...	...	...
		Average per acre	...	·02	·02	...	0·24	·05	...	·02	0·52	·05	·02	...	·05	...	...	...	...	...	...	...
					0·39				0·60				·07									

Statement showing Summary of Valuation Surveys for the year 1891-92—continued.

District.	Name of forest.	Locality.	Area in acres counted out.	Teak trees counted out. Sound green teak. I	II	III	IV	Unsound green teak. I	II	III	IV	Girdled teak. Sound.	Unsound.	Under 6 feet.	Teak stumps. Full-sized.	Under-sized.	Dead teak trees.	Catch. Above 3 ft. girth.	Between 1 ft. 6 ins. and 3 ft. girth.	Below 1 ft. 6 ins. girth.	Stumps.	Padauk.	Remarks.
				Mandalay Division—continued.																			
Thibaw	Ôngkôk ...	.....	98	4	2	26	151	3	2	12	194	5	4	1	20	...	...	...	...	...	...	6	
		Average per acre ...	...	·04	·02	0·27	1·54	·03	·02	0·12	1·98	0·05	·04	·01	0·20	...	...	...	...	...	...	·06	
						1·87				2·15			0·10										
	Papan ...	.....	25	31	10	9	36	5	4	2	19	13	1	2	1	...	...	...	...	...	...	21	
		Average per acre ...	...	1·24	0·40	0·36	1·44	0·20	0·16	0·08	0·76	0·52	·04	0·08	·04	...	...	...	...	...	...	·84	
						3·44				1·20			0·64										
	Pangsa ...	.....	102	27	21	38	254	35	46	67	289	128	77	26	25	...	...	...	...	...	...	9	
		Average per acre ...	...	0·26	0·21	0·37	2·49	0·34	0·45	0·66	2·83	1·25	0·75	0·25	0·25	...	...	...	...	...	...	·09	
						3·33				4·28			2·26										
	Tamhôn ...	.....	51	68	72	68	129	33	35	35	66	58	41	2	11	...	...	...	...	...	...	52	
		Average per acre ...	...	1·33	1·41	1·33	2·53	0·65	0·69	0·69	1·29	1·14	0·80	·04	0·22	...	...	...	...	...	...	1·02	
						6·61				3·31			1·98										
	Talôn ...	.....	64	3	3	3	45	9	6	10	109	175	7	251	7	...	...	...	...	...	...	...	
		Average per acre ...	...	·05	·05	·05	0·70	0·14	0·09	0·16	1·70	2·73	0·11	3·92	0·11	...	...	...	...	...	...	...	
						0·84				2·09			6·77										
	Loikôn ...	.....	16	1	...	4	28	3	3	8	50	...	...	...	3	...	...	...	...	...	...	...	
		Average per acre ...	...	0·06	...	0·25	1·75	0·19	0·19	0·50	3·12	...	...	...	0·19	...	...	...	...	...	...	...	
						2·06				4·00													
	Hammakaw ...	.....	38	...	...	4	99	4	2	5	89	1	10	...	2	...	...	...	...	...	...	...	
		Average per acre ...	...	...	...	0·11	2·61	0·11	·05	0·13	2·34	·03	0·26	...	0·05	...	...	...	...	...	...	...	
						2·71				2·63			·29										
	Tsingan ...	.....	49	2	9	39	197	7	9	19	127	10	5	1	63	...	...	...	...	...	...	32	
		Average per acre ...	...	·04	0·18	0·80	4·02	0·14	0·18	0·39	2·59	0·20	0·10	·02	1·29	...	...	...	...	...	...	·65	
						5·04				3·31			0·33										
	Right bank of Namlau to 3 miles above Ngôt or natural bridge.	.....	42	11	8	32	212	2	9	3	5	22	8	33	11	...	...	...	...	...	...	...	
		Average per acre ...	...	0·26	0·19	·76	5·05	·05	0·21	0·07	0·12	0·52	0·19	0·9	0·26	...	...	...	...	...	...	...	
						6·26				0·45			1·50										

Yatsauk	Shadaw chaung drainage to Yawagyi.	.....	9	35	27	14	22	9	2	...	...	5	...	...	...	...	...	...	...	...	...	...
		Average per acre ...	...	3·89	3·0	1·56	2·44	0·33	0·22	...	...	0·56	...	...	...	...	...	...	...	...	...	...
					10·89					0·56			0·56									
Thibaw	Right bank of Namlan to 3 miles below Ngôt.	.....	11	16	23	30	81	...	1	...	3	...	...	2	1	...	...	...	...	...	...	...
		Average per acre ...	...	1·45	2·09	2·73	7·36	...	0·09	...	0·27	...	...	0·18	0·09	...	...	...	...	...	...	...
						13·63				0·36			0·18									
Meiktila	Pangaing ...	.....	78	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	21·21	115	...
		Average per acre ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	·03	15·61	1·47	...
																			15·6			
	Thinbun chaung ...	.....	144	...	...	...	...	...	...	...	...	...	...	...	...	...	...	13	36	1,937	145	...
		Average per acre ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·09	0·25	13·45	1·01	...
																			13·79			
	Ywathit ...	.....	32	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	15	593	41	...
		Average per acre ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·47	18·53	1·47	...
																			19·00			
	Thabutgôn ...	.....	76	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	28	476	52	...
		Average per acre ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·37	6·26	0·68	...
																			6·63			
	Mahlaing ...	.....	24	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	215	99	...
		Average per acre ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·12	8·96	4·12	...
																			9·08			
	Ywanwe ...	.....	48	...	...	...	...	...	...	...	...	...	...	...	...	...	...	14	50	476	37	...
		Average per acre ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·09	1·04	9·92	0·77	...
																			11·25			
	Ôk ...	.....	48	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6	30	528	113	...
		Average per acre ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·12	0·62	11·	2·35	...
																			11·75			
Meiktila	Shangun ...	.....	64	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	9	670	45	...
		Average per acre ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·14	10·47	0·70	...
																			10·61			
	Kimni ...	.....	16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	56	135	12	...
		Average per acre ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3·50	8·44	0·75	...
																			11·94			
	Inginkun ...	.....	56	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	14	983	173	...
		Average per acre ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·25	17·55	3·09	...
																			17·80			
Kyauksè ...	Nwaku and Budayet	.....	34	...	...	...	...	...	...	...	...	...	...	...	...	...	...	10	18	88	33	...
		Average per acre ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·3	0·5	2·6	1·0	...
																			3·4			

Statement showing Summary of Valuation Surveys for the year 1891-92—continued.

District.	Name of forest.	Locality.	Area in acres counted out.	Teak trees counted out: Sound green teak. I	Sound green teak. II	Sound green teak. III	Sound green teak. IV	Unsound green teak. I	Unsound green teak. II	Unsound green teak. III	Unsound green teak. IV	Girdled teak. Sound.	Girdled teak. Unsound.	Girdled teak. Under 6 feet.	Teak. Full-sized.	Teak. Under-sized.	Dead teak trees.	Catch. Above 3 feet girth.	Catch. Between 1 ft. 6 ins. and 3 ft. girth.	Catch. Below 1 ft. 6 ins. girth.	Catch. Stumps.	Padauk.	Remarks.
				MANDALAY DIVISION—continued.																			
heinni ...	Lwekut ...	.....	32	15	14	16	65	7	3	2	34	...	...	...	6	...	...	...	...	...	...	...	
		Average per acre ...	...	·47	·44	·50	2·06	·22	0·09	·06	1·06	...	...	...	0·19	...	...	...	...	...	...	...	
						3·47				1·44					0·19								
	Tamong ...	.....	54	8	2	6	52	1	4	3	35	1	1	...	4	...	...	...	...	...	...	...	
	Ditto ...	.....	66	52	27	30	91	29	11	8	49	9	20	5	28	...	...	...	...	...	...	...	
		Total ...	120	60	29	36	143	30	15	11	84	10	21	5	32	...	...	...	...	...	...	...	
		Average per acre ...	...	·50	·24	·30	1·19	·25	·12	·09	·70	0·08	·17	·04	0·27			...	...	...	...	...	
						1·23				1·17			0·30		0·27	...	...						
Thibaw ...	Puka ...	.....	50	1	2	5	25	...	...	2	5	...	...	...	1	...	...	...	...	...	...	...	
		Average per acre ...	...	·02	·04	·10	·50	...	...	·04	·10	...	...	...	...	...	...	...	...	...	...	...	
						0·66				0·14			...		...	...	...						
	Kông Mong ...	.....	86	2	6	11	110	17	11	15	32	9	4	10	15	...	...	...	...	...	...	...	
		Average per acre ...	...	·02	0·07	0·13	1·28	0·20	0·13	0·17	0·37	0·10	·05	0·12	0·17	...	...	...	...	...	...	...	
						1·50				0·87			0·27		0·17	...	...						
	Pangmakka ...	.....	148	...	2	16	127	1	2	5	47	...	7	2	9	...	...	...	...	...	...	...	
		Average per acre ...	...	...	·01	0·11	·86	·01	·01	·03	0·32	...	·05	·01	·06	...	...	...	...	...	...	...	
					·98				0·37				0·12			...	...	...	...	...	...	...	
	Pangkang ...	.....	60	20	11	12	66	27	14	19	54	10	10	3	41	...	...	...	...	...	...	...	
		Average per acre ...	...	0·33	0·18	0·20	1·10	0·45	0·23	0·32	0·90	0·17	0·17	·05	0·68	...	...	...	...	...	...	...	
					1·82				1·92				0·38		0·68	...	...	...	...	...	...	...	
	Naku ...	.....	96	21	6	5	105	28	19	13	61	22	7	...	30	...	...	...	...	...	...	...	
		Average per acre ...	...	0·22	0·06	0·05	1·09	0·29	0·20	0·14	·64	0·23	0·07	...	0·31	...	...	...	...	...	...	...	
					1·43				1·23				0·30		0·31	...	...	...	...	...	...	...	
	Pang Kam ...	.....	68	2	4	10	65	4	5	8	38	...	4	...	18	...	...	...	...	...	...	...	
		Average per acre ...	...	·03	·06	0·15	·96	0·06	0·07	0·12	0·56	...	0·06	...	0·26	...	...	...	...	...	...	...	
					1·19				0·81				0·06		0·26	...	...	...	...	...	...	...	
	Sap Lang		16	...	...	...	2	1	...	1	18	...	1	...	2	...	...	...	...	...	...	...	
		Average per acre ...	...	...	...	...	0·12	0·06	...	0·06	1·12	...	0·06	...	0·12	...	...	...	...	...	...	...	
					0·12				1·18				0·06		0·12	...	...	...	...	...	...	...	

			Minbu Division.																			
Minbu	Palaung chaung	A western feeder of the Môn North of Sidôktaya.	56	...	...	...	...	...	...	...	...	...	...	...	...	...	4	19	32	11	...
	Chit chaung	Ditto	48	...	1	5	2	...	...	...	...	...	...	...	...	...	25	113	174	43	...
		Total	104	...	1	5	2	...	...	...	...	...	...	...	...	...	29	132	206	54	...
				...	·01	·05	·02										·28	1·27	1·98	·52	
		Per acre	...			·08												4·05			
			Mu Division.																			
Katha	Kansa	Hnettaw taung to Wabohin sakan	18	5	9	13	8	18	6	12	4	1	1	...	...	...	...	...	...	...	...
		Pyinbin Myelin road to Kyaukpya sakan.	16	5	3	6	17	10	3	4	6	...	...	...	...	...	...	...	...	...	...
		Total	34	10	12	19	25	28	9	16	10	1	1	...	...	...	...	...	...	...	...
		Average per acre	...	·29	·35	·56	·74	·82	·25	·47	·29	·03	·03	...	...	...	...	...	...	...	...
	.....	Kadet chaung West watershed to Shanpônzo sakan.	23·8	28	14	19	14	45	17	4	2	...	...	...	...	...	...	...	...	...	...
	.....	Ônshit taung to Kathetat	24·4	23	14	12	5	21	5	1	...	3	...	...	20	...	...	...	...	...	...
	.....	Sitpôn chaung West watershed to Wela chaung, East watershed.	40·2	32	12	6	17	33	9	2	...	1	1	2	5	...	...	...	...	...	...
		Total	88·4	83	40	37	36	99	31	7	2	4	1	2	25	...	...	...	...	...	...
		Average per acre	...	·94	·45	·42	·41	1·12	·35	·08	·02	·05	·01	·02	·28	...	...	...	...	...	...
			Pyinmana Division.																			
		Zalôkgyi	6·1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	208	134	...	..
		Tantabin	6·7	...	...	...	...	...	...	...	...	...	...	...	...	...	1	327	126	...	...
		Total	12·8	...	...	...	..	...	...	...	...	...	...	...	...	...	2	535	260	...	...
		Average per 100 acres	...	...	...	...	...	...	...	...	...	...	...	...	...	...	15·62	4,179·69	2,031·35	...	...
Pyinmana	Natthaye	Sinthewa	9·0	...	...	...	...	...	...	...	...	...	...	...	..	...	5	264	157	...	...
		Natthaye North	36·4	...	...	...	...	...	...	...	...	...	...	...	...	...	20	799	562	...	...
		Natthaye South	10·6	...	...	...	...	...	...	...	...	...	...	...	...	...	9	606	385	...	...
		Total	56·0	...	...	...	...	...	...	...	...	...	...	..	...	...	34	1,669	1,104	...	...
			...	...	...	...	...	...	...	...	...	...	...	...	...	...	60·71	2,980·36	1,971·43	...	...
	Zibyubin	Zibyubin	10·0	...	...	...	...	...	...	...	...	...	...	...	...	...	13	294	173	...	...
		Average per 100 acres	...	...	...	...	...	...	...	...	...	...	...	...	...	...	130	2,940	1,730	...	...
	Legathein	Legathein	53·2	...	...	...	...	...	...	...	...	...	...	...	...	...	84	2,049	893	...	...
		Average per 100 acres	...	...	...	...	...	...	...	...	...	...	...	...	...	...	157·89	3,851·50	1,678·57	...	...
	Yezin	Yezin	28·0	...	...	...	...	...	...	...	...	...	...	...	...	...	9	293	210	...	...
		Average per 100 acres	...	...	...	...	...	...	...	...	...	...	...	...	...	...	32·14	1,067·86	750	...	...
	.....	Yeni	40·0	...	...	...	...	...	...	...	...	...	...	...	...	...	2	392	195	...	...
	.....	Thawati	53·8	...	...	...	...	...	...	...	...	...	...	...	...	...	3	834	958	...	...
		Total	93·8	...	...	...	...	...	...	...	...	...	...	...	...	...	5	1,226	1,153	...	...
		Average per 100 acres	...	...	...	...	...	...	...	...	...	...	...	...	...	...	55·33	1,307·04	1,229·21	...	...

Statement showing Summary of Valuation Surveys for the year 1891-92—concluded.

District.	Name of forest.	Locality.	Area in acres counted out.	Teak trees counted out. Sound green teak. I	II	III	IV	Unsound green teak. I	II	III	IV	Girdled teak. Sound.	Unsound.	Under 6 feet.	Teak stumps. Full-sized.	Under-sized.	Dead teak trees.	Catch. About 3 ft. girth.	Between 1 ft. 6 ins. girth.	Between 1 ft. 6 ins. girth.	Stumps.	Padauk.	Remarks.
		Yaw Division.																					
	Pindaung	Along Man-Letpan road (north side)	20·0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	41	112	...	...	84	
		East from Anein	34·6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	73	160	...	...	33	
		East of Pindaung	38·2	2	4	...	1	4	4	...	...	...	...	...	...	...	...	32	106	...	...	14	
		South side of Nadet Pindaung path from watershed.	21·0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	25	38	...	...	...	
		Pindaung Lèma path from Pindaung.	34·6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	70	116	...	...	33	
		East of Lèma	29·6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	62	83	...	...	44	
		Along Man-Tabyin path from watershed of Man chaung to Yadi.	53·6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	29	95	...	...	22	
		Total ...	231·6	2	4	...	1	4	4	...	...	...	...	...	...	...	...	332	710	...	...	230	
		Average per 100 acres ...	...	·86	1·73	...	·43	1·73	1·73	...	...	...	...	...	...	...	...	143·35	306·36	...	...	99·31	
	Môn	Along path from Pyingyi to Nakyaw, to watershed of Sinchaung.	22	...	3	14	47	2	4	6	11	...	...	...	5	...	...	...	...	...	...	...	
	Salin	West of Nakyaw	24	...	4	14	56	2	4	7	31	2	...	6	7	...	...	9	38	...	...	...	
		Along path from Nakyaw to Pyingyi to watershed.	16	1	8	15	45	5	1	5	13	...	...	...	6	...	...	...	...	...	...	...	
		Along path from Yinyè to Thegôn to watershed.	35·6	...	1	7	44	2	2	9	94	...	...	4	30	...	...	15	114	...	...	9	
		Total ...	75·6	1	13	36	145	9	7	21	138	2	...	10	43	...	...	24	152	...	...	9	
		Average per 100 acres ...	...	1·32	17·20	47·62	191·80	11·90	9·26	27·78	182·54	2·65	...	13·23	65·88	...	...	31·75	201·06	...	...	11.90	
	Kyauksit	Yinye-Thegôn path from watershed	20·0	3	4	11	34	2	4	5	20	3	...	3	14	...	...	22	144	...	...	12	
		West of Saw	48·0	4	10	26	22	3	3	5	28	9	1	7	48	...	...	29	68	...	...	60	
		Total ...	68·0	7	14	37	56	5	7	10	48	12	1	10	62	...	...	51	212	...	...	72	
		Average per 100 acres ...	...	10·29	27·94	54·41	82·35	7·35	10·29	14·71	70·59	17·65	1·47	14·71	91·18	...	...	75·00	311·76	...	...	105·88	
		Path from Kyetlein to Kyaukleik ...	80·0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	42	185	...	...	9	
		West of Kyaukleik	33·0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	14	41	...	...	...	
		East of Kyaukleik	45·6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	53	...	...	...	
		Kyaukleik-Man path	34·0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	21	147	...	...	41	
		South-west of Man	42·6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	32	80	...	...	69	
		North-west of Man	57·6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	51	189	...	...	34	
		From Man along Mankyaukka path to ridge of Pôndaung.	26·4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	46	70	...	...	13	

Pakôkku	Man	North of Man	36·8	6	1	2	4	4	...	...	...	1	...	...	...	...	...	39	58	...	...	48
		South-east of Man	44·4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	52	127	...	...	11
		Along Man-Letpan road ...	66·0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	135	221	...	...	215
		East from camp 1 mile south of Letpan.	44·6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	152	138	...	...	187
		East from Kwingin	28·0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	117	241	...	...	27
		North and east of Hnget chaung ...	34·4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	117	175	...	...	41
		From Hnget chaung Kwingin path along demarcated line to watershed of Tanlè chaung.	25·4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	17	98	...	...	3
		Hnget chaung Kyaukleik path ...	18·6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	27	96	...	...	21
		Total ...	617·4	6	1	2	4	4	...	...	...	2	...	...	...	...	...	865	1,922	...	...	669
		Average per 100 acres ...	...	·97	·16	·32	·65	·65	...	...	...	·32	...	...	...	...	...	140·10	311·31	...	...	108·36
				SOUTHERN SHAN STATES.																		
	Kenghkam	Wan Pai	3½	7	29	44	71	3	7	11	10	2	4	15	20	14	...	...	...	...	...	...
		Do	8	2	6	33	96	4	8	14	12	4	4	10	25	9	...	...	...	...	...	...
		Wan Pyit	2½	2	11	36	53	3	14	48	17	5	2	3	3	...	...	...	...	...	...	...
		Ta Kam	10	5	30	78	176	15	17	28	53	3	6	4	11	5	...	...	...	...	...	...
		Pung Hè	8½	2	18	48	82	2	6	12	29	1	5	3	5	2	...	...	...	...	...	...
	Mông pu ...	Si paw	12	5	19	18	53	22	6	2	6	17	13	10	44	5	...	...	...	...	...	...
	Nam Sim	Kalat	8	...	1	6	18	2	5	4	7	...	...	1	3	...	...	...	...	...	...	...
		Pai Un	15	...	8	34	202	11	46	27	78	6	21	...	39	6	...	...	...	...	...	...
	Mèhang	Pongnam San	8	6	...	1	...	13	5	5	...	9	9	...	43	2	...	...	...	...	...	...
		Vicing Kow	6	24	2	2	1	21	...	...	...	15	4	...	22	...	...	...	...	...	...	...
		Hong Leuk	6	11	2	15	12	23	9	3	2	7	2	...	29	2	...	...	...	...	...	...
		Nam Ha	25	45	25	26	19	118	78	8	4	198	71	51	9	...	...	...	...	...	...	...
		Hang Heng	15	25	8	...	...	74	85	1	...	70	53	34	102	1	...	...	...	...	...	...
		Tam Ngop	12	11	17	2	...	31	44	13	...	50	22	23	15	2	...	...	...	...	...	...
		Total ...	139½	145	176	343	783	342	330	176	218	387	216	154	370	48	...	...	...	...	...	...
		Average per acre ...	...	1·04	1·27	2·47	5·63	2·46	2·37	1·27	1·57	2·78	1·55	1·11	2·66	·35	...	...	...	...	...	...

Valuation Surveys on India-rubber Forest.

District.	Name of forest.	Area on which countings extended.	Ficus elastic trees.				Remarks
			Tapped.	Untapped.	Saplings.	Dead.	
		Acres.					
Hukong Valley, Bhamo and Upper Chindwin.	U-kun	66	4	...	...	1	
	La-kun	90	5	...	...	3	
	Makan	164	3	2	1	...	
	'Ntuptumsa	8	4	1	2	...	
	'Ntamaja	50	5	...	...	2	
	Leikshen	178	2	2	3	3	
	Sumpaung	258	52	21	1	41	
	Maisha	150	15	4	6	9	
	Prunsa	244	5	...	...	...	
	'Ndan	190	18	...	...	1	
	'Ntsa	200	3	...	...	...	
	Leche	200	11	...	3	2	
	Sanka	60	2	...	...	...	
	Naymyong (1)	7	12	...	7	2	Average trees per
	Naymyong (2)	10	11	...	3	3	
	Naymyong (3)	11	47	...	8	7	
	Sakan	176	4	...	...	1	
	Momôn	120	2	...	1	...	
	Malin	188	2	...	3	...	
	Sapyang	200	7	...	...	4	
	Mabu	124	17	...	...	3	
	Sainglaing	192	19	...	4	...	
	Total ...	2,886	250	30	42	82	

APPENDIX D.

Statement of Teak Trees girdled during the season 1891-92.

Division.	Girdling officer.	Revising officer.	Range.	District.	Locality.	Number of teak trees.
Chindwin.	Messrs. H. N. Thompson and Forteath, Assistant Conservators of Forests.	Messrs. H. N. Thompson and Forteath, Assistant Conservators of Forests.	.....	Upper Chindwin.	Lebin ... Lanlet chaung	41
					Lebin chaung	1,095
					Wayô chaung	891
					Taungyin chaung	367
					Chaunggyin chaung	411
					Kyaukka chaung	2,021
					Tan chaung	1,832
					Kyun chaung	159
					Ze chaung	237
					Nattaga chaung	1,398
					Nat-u tin chaung	206
					Namyaung chaung	437
					Manlaung chaung	28
					Pyaungbôk chaung	315
	Mr. C. E. Muriel, Deputy Conservator of Forests.	Mr. C. E. Muriel, Deputy Conservator of Forests.	.....	Lower Chindwin.	Patolôn chaung: Thabeitsè chaung	11
					Letpan chaung	45
					Môndân chaung	5
					Taungthale chaung...	11
					Tôngan chaung	127
					Hlawun chaung	15
					Sadan chaung	5
					Thapan chaung	17
					Sagaungaung chaung	50
					Pauktaw chaung	10
					Nongè chaung	28
					Nahwè chaung	34
					Lema chaung	33
					Petpa chaung	612
	Messrs. H. N. Thompson and Forteath, Assistant Conservators of Forests.	Messrs. H. N. Thompson and Forteath, Assistant Conservators of Forests.	.....	Upper Chindwin.	Taungdwin chaung: Tein chaung	103
					Tônbin chaung	44
					Hmôktha chaung	9
					Pyaungbôk chaung	409
					Kyun chaung	381
					Nankaukkauk chaung	449
					Nankanpet chaung	641
					Paluswè chaung	895
					Nanzalain chaung	124
					Total ...	13,497
Katha ...	.....	.....	...	...	Along a tract 300 feet wide along railway line from Mawhun to within a few miles of Mohnyin.	2,264
					Carried over ...	15,761

Statement of Teak trees girdled during the season 1891-92—concluded.

Division.	Girdling officer.	Revising officer.	Range.	District.	Locality.	Number of teak trees.
					Brought forward ...	15,761
Mandalay.	H. Calthrop, Esq., Deputy Conservator of Forests.	.....	Myittha Panlaung.	Yatsauk.	Drainage system of Zawgyi river. Nammelin	1,205
					Shadaw	911
	R. C. Dun, Esq., Assistant Conservator of Forests. Mr. H. Calthrop.	.....	Myitgne.	Thibaw.	Myitgne. Papan	36
					Tamheng	42
					Talôn	28
					Namlan river right bank	104
					Total ...	2,326
Mu.	M. J. C. Murray, Deputy Conservator of Forests.	Mr. J. C. Murray, Deputy Conservator of Forests.	.....	Ye-u.	Laungbwa and Kyaukpinhla chaungs...	532
					Tinwa Forests—Thayet chaunghwa	59
					Inga Forests—Sagabin chaunghwa	104
					Seaing Forests—Inma and Seaing chaungbwa	56
					Kansa Forests: Hnettawtaung	463
					Onshittaung	
					Thanataung	
					Taungsin chaung	
					Pemyin chaung	
					Dahthwegyauk chaung	
					Wela Forests... Kadet chaung	687
					Wela chaung Bya	
					Sitpôn chaung	
					Myitkyin chaung	
					Kathètat chaung	
					Monan chaung	
					Nabe chaung	
					Kywematettaung	
					Total ...	1,961
					Old girdled trees marked with Government hammer and made over to the Bombay Burma Trading Corporation, Limited, for extraction—	
					Kansa Forest	199
					Wela Forest	263
					Nammaw Forest	102
					Mawnaing Forest	72
					Nanhyan Forest	30
					Kin Forest	231
					Inga Forest	10
					Segginkôn Forest	425
					Taungmaw Forest	150
					Tinwa chaung Forest	421
					Pyin chaung Forest	40
					Kyaukpya Forest	30
					Nandahauk Forest	141
					Tagyaing Forest	343
					Total ...	2,457
					GRAND TOTAL ...	22,505

Marginal remarks by E. C. S. George, Esq., Deputy Commissioner, Bhamo, on Bhamo Division Annual Report.

In regard to forest offences.—The Deputy Conservator apparently has forgotten Forest Department Circular No. 22 of 1891. In many cases (even criminal cases) we are as yet unable to arrest and punish the guilty, and in many cases, as here, it would be inequitable and impolitic to do so.

In regard to experiments and exotics.—I would strongly urge the advisability of a grant for experimental culture of fruit trees at Kamaing. This district is almost fruitless, though I am confident that in many parts, *e.g.*, Kamaing, the cultivation of fruit trees would well repay a little expenditure. The people will not take the initiative themselves.

Remarks by Lieutenant-Colonel C. B. Cooke, Commissioner of the Northern Division, on the report of the Deputy Conservator of Forests, Bhamo Division, for the year 1891-92.

As no officers have been available for the purpose of making enquiries incidental to forest settlement, the four proposed forest reserves, with an aggregate area of 251 square miles, have not yet got beyond the preliminary stage. No working plans have yet been prepared in this division.

2. In 17 cases 19 persons were prosecuted before the magistracy for breaches of the forest laws; convictions were obtained in 11 cases against 12 persons, while 7 persons were acquitted. The Deputy Commissioner very properly refused to entertain the complaints in three cases against ignorant Kachins. The forest laws are a novelty to the people around Bhamo, and it is inadvisable that the penal clauses should be applied with undue severity until they become more generally known.

3. An experimental fruit garden, on the same principle as that near the town of Mergui, might well be started at Kamaing as suggested by the Deputy Commissioner. The climate there ought to suit all those descriptions of fruit trees which are found in abundance in Assam.

4. The revenue realized during the year in this division was Rs. 1,73,295, exclusive of the royalty on jade stone and amber levied under Rule 17(*a*). This royalty, which in the case of jade stone is 33⅓ per cent. *ad valorem*, and in the case of amber 5 per cent. *ad valorem*, was farmed during the year for Rs. 52,500, which has been realized in full, but the final instalment of Rs. 13,125 was only credited on the 4th April, and therefore is not a receipt of the year 1891-92. Including what was actually realized, the gross forest revenue of the division amounts to Rs. 2,12,670, with an expenditure of Rs. 30,603, or a net surplus of Rs. 1,82,067.

From G. G. Collins, Esq., Deputy Commissioner, Katha, to the Commissioner of the Northern Division,—No. 1253-9F., dated the 6th May 1892.

In forwarding you the Forest Report from the Deputy Conservator of Forests at Bhamo, I am unable to add any remarks as the locality through which Mr. Palmer has worked is unknown to me. The forest area which Mr. Palmer dominates runs into Katha at the north, but no work of importance with regard to proposed reserves could be done this season as no officer was available for the purposes of settlement.

Endorsement by Lieutenant-Colonel C. B. Cooke, Commissioner of the Northern Division,—No. 270-13K., dated the 9th May 1892.

Copy of the above forwarded to the Conservator of Forests, Eastern Circle, Upper Burma. I have already commented on this report.

From F. S. Copleston, Esq., Commissioner of the Southern Division, to the Conservator of Forests, Western Circle,—No. 2594-4F., dated the 2nd June 1892.

I have the honour to forward the Forest Administration Report for the Chindwin division as received by me from the Deputy Commissioner, Pakôkku.

The Deputy Commissioner makes no remarks beyond inquiring whether the Subdivisional Officer, Gangaw, should proceed to make the enquiries referred to in Forest Notifications Nos. 10 and 11, dated the 8th January 1891.

It is of course useless to think of this now. I presume he *issued* notices to residents in and near the proposed reserves, and this was, I think, all Mr. Chapman was meant to do. A more experienced officer is required for the actual settlement work, and you will no doubt move the local Government to appoint a special officer next dry season.

I have no remarks to make on the report of the Deputy Conservator.

From Major C. H. E. Adamson, C.I.E., Commissioner of the Central Division, to the Conservator of Forests, Western Circle,—No. 2248-18F.F., dated the 20th June 1892.

I have the honour to forward the Forest Administration Report for the year 1891-92 on the Chindwin Forest division, together with the remarks of the Deputy Commissioners of the Upper and Lower Chindwin districts.

Remarks by the Deputy Commissioner, Kindat.

B.—PROTECTED FORESTS.

Kindat report submitted on the 29th August 1891.

Taungdwin Reserve Report submitted on the 25th March 1892.

The settlement enquiry in Kindat and Yu reserves were made in March and not in February 1892.

Bon reserve is now being done by Mr. Browne. No Forest Officer was appointed to assist him. His report will be ready in a few days.

Ahlaw reserve was settled by Maung Ba Hlaing, who has made enquiries into the rights claimed. The report is now with the Deputy Commissioner awaiting the termination of the three months allowed for appeal.

I notice the Deputy Conservator further proposes to reserve tracts at Lebin, Kyauka, Tan, and Weye. There is no objection to reserves of the three first-named tracts, which are contiguous and will yield good teak, but there are two villages touching the Weye whose rights would detract from the value of the reserve. The Deputy Conservator says the teak produced is not good, and it seems to me that it would not be worth while to restrict the villagers for very problematical results.

C.—UNCLASSED DISTRICTS.

The whole district may be regarded as an *unclassed forest* with a little cultivation and a few small reserves.

PROTECTION AND IMPROVEMENT.

(*a*) *Establishment.*

No really satisfactory forest work can be done until the Upper and Lower Chindwin Revenue districts are made into two or more forest divisions. I believe this has been in contemplation for years, but the sooner action ensues the better. There are a number of reserves in process of formation, and enormous tracts rich in good teak have been found on the streams which run from Wuntho through the Legayaing subdivision into the Uyu.

YIELD AND WORKING.

(*a*) *Girdling.*

I think it is a pity that Mr. Muriel changed his original plans for girdling. I understood that one of the Assistant Conservators of Forests was to go to the Uyu and one to work in Kalè, and I think if this had been done a more satisfactory yield would have resulted.

Each officer was given a guard of 15 men, and had more been necessary I could have given more.

Had Mr. Muriel been at Kindat it is probable that this would not have happened, and it is only another instance of the impossibility of one officer working so large an area.

MINOR FOREST PRODUCE.

I made careful enquiries into the rubber trade at Kanti and add an extract from my diary. It will be seen that the merchants there for their working season, that is, from January to June 1891, admitted having 16,100 viss.

The commercial season and official year not being concurrent, it is difficult to compare the quantities. They had made arrangements to bring out about three times the quantity during the season January to June 1891.

As will be seen from my report, nearly all the rubber is obtained from countries to the north and north-east and north-west of Kanti, and this year they are working still further away. Rubber is planted in many parts of the Legayaing township as an ornamental tree. There are a few in Kindat and they do very well.

I think something might be done in planting young forests near Paungbyin.

The forest staff requires strengthening in order that it may watch the minor produce.

There is a large quantity of cutch waiting to be worked out in the southern part of Kalè and a little of the south of the Mingin township. I have seen only one set of pots when travelling.

Extract from the diary of H. L. TILLY, Esq., Deputy Commissioner, Upper Chindwin, for December 1891.

* * * * *

23rd December.

* * * * *

Three kinds of India-rubber, that from the tree in two states, raw and prepared, the former by Theinbaws and the latter by Chins. That prepared from a creeper also comes down from the Chin Hills.

Saw the Chinese rubber merchant. He told me that he got out about 8,000 viss last year and *expected to get 20,000 this year.* I also obtained a list from the ywaok of the

rubber brought out last year, and the total amounts to 16,100 viss and was obtained from the Nantawan, Mantakwan, and Pehanmaing valleys.

Nantawan.	Mantakwan.	Pehanmaing.
2,000	1,500	2,000
700	300	400
1,500	800	300
500	500	500
300	2,000	1,000
	700	
5,000	300	4,200
	300	
	1,000	
	6,900	

Mantakwan	6,900
Nantawan	5,000
Pehanmaing	4,200
Total ...	16,100

It was taken out as follows by the Chinaman Set Shan, U Thaing, Ko Kya U, Nga Se Naing, Nga Pyaung, and a native (Gurkha) Ma Pu. I think from conversations with different people that these amounts are understated and that about 20,000 viss were worked out last year. As far as my memory goes, the Forest Department did not levy revenue anything like the smaller amount.

The merchants give expensive presents to the Sawbwas in whose territory they collect the rubber. These presents are recognized as a species of earnest-money, but are *apart from the price of Rs. 1-8-0 a viss paid at Kanti.* When once a Sawbwa has taken the present and the property is accepted, the contract is carried out before any subsequent one made with another party.

Of the three streams within the watershed of which the rubber is collected, one is the Pehanmaing, a tributary of the Nammaw, a stream which falls into the Chindwin 20 miles above Kanti.

Mantakwan falls into the main river above Kyauksè and between the first and second defiles.

The third stream, the Nantawan, is a tributary of the Tamai, the river of the Hukong valley. It will be seen that two of the rubber-producing tracts are out of the Kanti State, while the third is only nominally within and is claimed by numerous petty headmen, self-styled Sawbwas.

These men are each lord of a village, and are the greatest obstacle to opening out the country, as each one has to be propitiated before any one can pass through or trade within their village boundaries.

Thus, no less than twelve Sawbwas were concerned in last year's collection of rubber—

1.	Lasum Kan	2,000
2.	Pa Tut Hla	1,500
3.	Sokan	700
4.	Pa Kun Hla	500
5.	Saw Maung Hla	1,800
6.	Nga Laung Kan	2,600
7.	Le Sai	3,200
8.	Setchin Kan	1,000
9.	Mainlu Kan	500
10.	Shwe Kwa Tin	800
11.	Naing Paw Kan	1,000
12.	Maing Pyin	1,000
	Total ...	16,100

Statement showing cases tried under the Forest Act in the Upper Chindwin district during 1891-92.

Name of accused.	By whom tried.	Result.
1. Maung Shwe Dun ...	Deputy Commissioner, Kindat ...	Fined Rs. 15 and Rs. 10 compensation.
2. Maung Yan Shin ...	Ditto ...	Fined Rs. 10 and Rs. 5 compensation.
3. Maung San Meik ...	Assistant Commissioner, Kindat...	Acquitted.
4. Maung Bya ...	Ditto ...	Fined Rs. 5.
5. Maung Shwe Yauk ...	Subdivisional Magistrate, Mingin.	

Statement showing cases tried under the Forest Act in the Upper Chindwin district during 1891-92—concluded.

Name of accused.	By whom tried.	Remarks.
6. (1) Maung Pyan ... (2) Maung Sein ... (3) Maung Kyu ..	Subdivisional Magistrate, Mingin.	
7. (1) Nga Paw ... (2) Shwe Tha ... (3) Nga Hmaw ... (4) Tha Yauk ... (5) Pu Lôn ...	Township Magistrate, Balet ...	1st and 2nd accused to pay Rs. 15 each ; 3rd 4th and 5th Rs. 5 each.
8. (1) Nga Pôn Gyaw ... (2) Nga Shwe Chi ...	Township Magistrate, Balet ...	Fined—1st accused Rs. 15 ; 2nd Rs. 5.
9. (1) Nga Paw ... (2) Pôn Aung ... (3) Nga Ni ... (4) Chit Pôn ...	Township Magistrate, Balet ...	Fined—1st accused Rs. 20 ; 2nd and 3rd Rs. 15 each ; 4th Rs. 5.
10. (1) Maung Ye Min ... (2) Maung Hmwe Nit ... (3) Maung Nyo ...	Township Magistrate, Balet ...	1st accused acquitted ; 2nd and 3rd fined Rs. 50 each.
11. Nga Tôk ...	Township Magistrate, Balet ...	Fined Rs. 2.
12. Nga Kwin ...	Subdivisional Magistrate, Mingin	Rs. 5 fine ; Rs. 4-8-0 compensation.
13. (1) Nga Ya Ggaw ... (2) Tha Gyaw ... (3) Tha Baw ... (4) Shwe Tha ... (5) Kyauk Lôn ...	Township Magistrate, Balet ...	Each to pay Rs. 5.
14. (1) Maung Kyaw The ... (2) Maung Than Gè ... (3) Maung Kyu ... (4) Maung Sein ... (5) Maung Kyaw Tha ... (6) Maung Shu Po ... (7) Maung Pyawgale ...	Subdivisional Magistrate, Mingin.	1st, 2nd, 3rd, 5th, 6th, and 7th accused fined Rs. 25 each ; 4th accused died before trial. No compenations awarded.

Endorsement by Major C. H. E. ADAMSON, C.I.E., Commissioner of the Central Division,—dated the 18th June 1892.

FORWARDED.

Remarks by Major G. S. EYRE, Deputy Commissioner, Lower Chindwin,—dated the 12th May 1892.

Clearing Paya Kyaung Alaungdaw Kathaba.—This stream flows underground through a hill. The Alaungdaw pagoda is on the top of the hill, and there is a cave under the pagoda entered from the subterranean passage. Any attempt to blast the rocks here would be regarded as sacrilege by the Burmese. I have seen the taik formed in the passage. It could easily be broken up without injuring the passage in any way. The only difficulty would be in getting any Burmans to work there as the place is regarded as sacred.

I hope this blasting will not be permitted.—C. H. E. A.

Forest offences.—Forest offences are few, considering the temptation to try and avoid regulations interfering with free use of forest produce.

Thugyis have copies of Acts and rules, and have inspected cutch camps and taken an interest in forest matters generally.

Free licenses to extract teak for domestic and religious use.—The present rules, in my opinion, are much too strict.

The Forest Officer is constantly on tour, very often out of the Lower Chindwin altogether, yet, until he signs a free pass, a man who wishes to repair his house or build a kyaung has to wait. The very great delay and much avoidable visitation is caused by the present system.

I thoroughly endorse the views of the Deputy Commissioner, Lower Chindwin, on the subject of free passes for extracting timber for local purposes. At present the people in out-of-the-way places are practically debarred from cutting dead teak trees for building zayats or repairing houses. Some Forest Officers, too, put difficulties in the way of granting passes and so harass and worry the people.—C. H. E. A.

I would propose that the Township Officer be empowered to issue free permits to cut dead teak for domestic and religious purposes, reporting, of course, through the Deputy Commissioner, for the information of the Deputy Conservator of Forests. I have had many complaints of the present delays which are in no way the fault of the Deputy Conservator.

Tax on fuel for factories.—Wood is required for brick-making and lime-burning. The remarks made above apply to the licenses granted to cut wood for manufacturing purposes. I would authorize Myoôks in charge of townships to issue licenses.

From N. G. CHOLMELEY, Esq., Deputy Commissioner, Ruby Mines, to the Conservator of Forests, Eastern Circle,—No. 100F., dated the 9th June 1892.

I HAVE the honour to forward herewith the Deputy Conservator of Forests, Katha's annual report for his division and to remark—With regard to the proposed reserves in Momeik to which I made objection, my information as to the tract was derived from Mr. Daniell, who knows as much about it as any one. It may be possible to take up the matter next open season.

The Shwè-u-taung scheme will probably require considerable modification.

A proper Forest establishment is urgently required at Mogôk; forest fires are of constant occurrence, and there is no one to put them out. The revenue might easily be increased to meet the increased expenditure by laying a heavier duty on certain kinds of timber. The effect of leaving the district without a Forest Officer for some months has rightly been described as disastrous. The Mogôk forester and forest clerk both got into bad habits, and were convicted of extortion, and the people seem to have done what they pleased.

I should recommend the appointment of an Assistant Conservator for Momeik, as the new reserved forests will require much looking after, and there are cutch-workings and other matters that require supervision.

From Captain J. J. CRONIN, Deputy Commissioner, Meiktila, to the Conservator of Forests, Eastern Division (through Commissioner of the Eastern Division),—No. 1108, dated the 21st May 1892.

IN forwarding herewith the annual report on the Forest Administration of the Mandalay division for the year 1891-92, received from the Deputy Conservator of Forests, Mandalay, I have the honour to submit the following remarks on the report so far as it relates to this district. The over-working of the cutch forests, and the early extinction of the cutch-boiling industry, I have on several occasions brought to notice. Too many licenses have been issued in the past, and the issues have been made without sufficient discrimination, the majority of the licenses being actually purchased by large speculators and capitalists who supplied the purchase-money to the villager who obtained the license. In very few instances, indeed, did the actual worker obtain licenses.

The result of this and the insufficient forest establishment has been that cutch trees of every size have been ruthlessly destroyed over a large area during the last few years, but more especially last year.

I would remark, as I have before brought to notice, the forest laws are daily broken by the cutch-boilers, and under existing rules I see no means of coping with them. Not only are young and under-sized trees not brought to the boiling-camp after being cut down and chipped where they fell, but in the majority of instances the cutch-boilers do not even go to the trouble of cutting down the trees young undersized, but simply chip the heart out of the tree as it stands, leaving the mutilated trunk and branches thus :—

In order to cope with this sharp practice of the cutch-boilers, I would suggest that a new rule be added to the forest rules that in any area in which undersized trees are found mutilated or felled, the Forest Officer or Deputy Commissioner shall, unless the actual offenders are discovered and convicted, if he considers necessary, cancel all licenses held within the area or forest in which such trees are found felled or mutilated. I would further suggest that the forest establishment be largely increased, that Forest Officers make inspection of the cutch-producing tracts at least every three months, and that the number

of licenses to be issued in future do not, at least for some years, exceed a maximum of 250, such licenses only to be issued to *bonâ fide* workers. As noticed by the Deputy Conservator, green teak has been extracted by contractors and others from the forests adjoining the Shan hills and the Southern Shan States. One case brought to notice resulted in a conviction. The offender was a Public Works contractor.

In this case also, if the forest adjoining the road had been better supervised, this practice, which had been going on for some time, would have been detected long ago and the forests saved considerable loss.

Endorsement by J. E. BRIDGES, Esq., Commissioner of the Eastern Division,—dated the 23rd May 1892.

FORWARDED to the Conservator of Forests, Eastern Circle, Mandalay.

Remarks by Lieutenant-Colonel C. B. COOKE, Commissioner of the Northern Division, on the report of the Deputy Conservator of Forests, Mandalay Division, for the year 1891-92.

THE greater part of this interesting report deals with matters outside the limits of this division, and I am not in a position to comment thereon.

No further inspection of the Madaya forest has been made during the year. One hundred square miles of this forest are within the Civil district of Mandalay, and 14 square miles of that are said to be covered with cutch trees, but nothing is said in the report as to whether any licenses for cutch-boiling in this area have been issued.

2. The difficulty said to be experienced in dealing with those who cut undersized cutch trees might, I think, be met by rendering every license in force in a particular area liable to cancellation if any stump of an undersized cutch tree is found within that area. The particular offender may not be detected, but if all are liable, the licensees will watch one another closely and so help the Forest authorities in maintaining their rules. It seems absolutely necessary that something should be done to prevent the cutch tree from being exterminated, and the number of licenses will have to be limited or the fee enhanced; the latter suggestion is under consideration.

3. The forests within the drainage system of the Myitngè river have been greatly overworked, and if teak is to be given a chance of reproduction, all work there will have to be suspended for many years.

4. Notwithstanding the large area of this Forest division, only 20 cases of breaches of the forest law were dealt with during the year. It cannot be said that the rules are being enforced with undue stringency, and it is satisfactory to find that the people are not being unduly harassed, but are being gradually educated up to the present situation in respect of forest matters. The remarks of the Deputy Conservator as to the manner in which Public Works contractors defy the provisions of forest rules by cutting green teak are not clearly understood; presumably, Public Works Officers repudiate the illegal acts of their contractors, and in that case the contractors should be treated as ordinary offenders.

5. The experimental garden at Maymyo should be developed and worked on the same principle as that at Mergui. This, I see, has been suggested by the Deputy Commissioner of Mandalay.

6. The remarks in paragraph 50 as regards free passes for timber for kyaungs, &c., are not understood. The surplus profit of the year amounted to Rs. 75,989, being a considerable decrease as compared with each of the three previous years. This is attributed partly to revenue now being collected at more stations than before, and, if so, of course the decrease is but little more than nominal.

From K. G. BURNE, Esq., Deputy Commissioner, Mandalay, to the Commissioner of the Northern Division, —No. 1728-8F., dated the 26th May 1892.

I HAVE the honour to forward a report received from the Deputy Conservator of Forests on the Forest Administration of the Mandalay division for 1891-92.

Paragraph 12 of the report refers to the Madaya forest containing 200 square miles, of which 86 square miles of teak and 14 of cutch are situated in the Mandalay district, but owing to paucity of officers no thorough inspection appears to have yet been made.

Mr. Calthrop asks for the assistance of a large staff of European officers, and his request seems reasonable enough if the interests of Government are to be properly protected.

It is impossible for the Subdivisional Officer, Mr. Calderwood, to do the work, as his time is fully occupied with the ordinary work of his charge, besides having to look after the work of the Deputy Conservator's office during the absence of the latter from headquarters during the open season.

Paragraph 29.—The Deputy Conservator refers to an ingenious method adopted in Meiktila for avoiding the effect of a breach of the Chief Commissioner's orders regarding the felling of undersized cutch.

I think this attempt to over-ride the orders of Government might be frustrated by allotting areas within which camps may fell cutch and make each camp responsible for its

own area. If any undersized cutch trees are felled after the issue of the licenses, the whole of the licenses in that camp shall be withdrawn.

It would not, I think, be difficult to define cutch areas for camps. I do not, however, see that any hardship would be felt by making each cutch camp responsible for a certain area any more than can be said to be felt in the case of making villagers responsible for crime occurring within their village areas.

Paragraph 32.—The remarks of the Deputy Conservator of Forests reflecting upon the Public Works Department in respect to the felling of green teak might be made known to the Executive Engineer to see what he has to say and to prevent such felling in future.

The experiments in Maymyo with the eucalyptus plant have been encouraging on the whole. The proportion of thriving plants to the total number put down is small, 17 per cent., but it may be that other causes than climate or soil were at work, two of which are referred to, namely, attacks from insects and unusually dry season. The young trees one sees at Maymyo look, on the whole, remarkably well. I should think the experiments made warrant a continuance of planting of the species which have thriven the best up to date.

I do not believe much in experimenting with European fruits.

Potatoes would appear to grow fairly well in Maymyo, and an experiment on a large scale in this direction would be valuable.

I would also suggest experiments in tea, coffee, &c.; in fact, an experimental garden, carried on under conditions similar to the Mergui garden. In the absence of the Forest Officer, the Subdivisional Officer would have ample time to devote attention to this work.

Endorsement by Lieutenant-Colonel C. B. Cooke, Commissioner of the Northern Division,—dated the 27th May 1892.

Forwarded, together with my remarks thereon, to the Conservator of Forests, Eastern Circle, Upper Burma.

From J. G. Scott, Esq., c.i.e., Officiating Superintendent, Northern Shan States, to the Conservator of Forests, Eastern Circle,—No. 225-30—1, dated Camp Thibaw, the 29th May 1892.

I have the honour to forward herewith the Progress Report of the Administration of the Mandalay Forest division for the year 1891-92.

2. I have been unable to visit the Hsi Paw State or to attend to the cases of infraction of the forest laws until within the last seven days. I have confiscated to the use of your department all the timber cut by and for the Public Works Department. The other cases are not yet finished, but the result of the enquiry now proceeding will be communicated to you.

3. I may add that I have never heard of the untouched forest alleged to exist on a tributary of the Nammaw, but will make enquiries as to its existence.

From H. L. Eales, Esq., Deputy Commissioner, Magwe, to the Commissioner of the Southern Division,—No. 1240, dated the 26th May 1892.

In submitting the report of the working of the Forest Department, Minbu Division, 1891-92, I have the honour to state that as I have been so short a time in the district, I do not feel justified in attempting to scrutinize the statements and opinion set forth therein.

Practically, forest settlement operations were not begun in the Magwe district during the past year.

I have not yet received the Forest Settlement Officer's report on the work done, and I am, therefore, unable to offer an opinion on the proposed reserves.

Endorsement by F. S. Copleston, Esq., Commissioner of the Southern Division,—dated the 1st June 1892.

Forwarded to the Conservator of Forests, Western Circle.

From H. S. Hartnoll, Esq., Deputy Commissioner, Minbu, to the Commissioner of the Southern Division,—No. 424-5F., dated the 18th May 1892.

I have the honour to forward to you herewith the annual report on the work of the Forest Department, Minbu division, for 1891-92.

1. I have not as yet had the proceedings relating to the proposed reserves from the Forest Settlement Officer. Mr. Hertz was transferred to the charge of the Salin subdivision from his forest settlement work, and, as he has been heavily worked in his new charge, he has not been able as yet to complete his report on the reserves. He expects, however, to finish them within a week, when they will be sent to Mr. Aplin for his opinion and then sent to me. I have just returned from a tour in the neighbourhood of the reserves,

and have received various petitions against the decision of the Forest Settlement Officer dealing with the following matters :—

(1) that they have not been allotted sufficient grazing-ground ;
(2) that they are not allowed in cases to cut wood for their houses ;
(3) that they wish to cut taungyas, and having done so, object to plant cutch and teak seed in them as ordered, for they say that, if they do so, they will not be able to use the ground in the future for taungya as it will be stocked with cutch and teak trees.

On the receipt of the proceedings I shall be in a position to enquire into these matters and pass orders on them.

I know that Mr. Hertz has done the work very carefully.

2. I agree with the Deputy Conservator's remark about the inadequacy of the pay of the forest guards. Respectable men are not attracted by the rate offered, and the result is, that men are in cases appointed who no doubt ask for and receive moneys to hush up true or alleged breaches of the forest laws.

3. With regard to the issue of cutch licenses in the Sagu and Legaing townships, I have recently had a communication from the Deputy Conservator on the subject. When the correspondence was first opened some two years or so ago, it was stated, and in great part admitted by the Deputy Conservator, that cutch trees in these townships rarely reached the girth of 3 feet, as the soil was poor and the trees were stunted. The girth for which licenses should be issued was reduced to 2 feet.

If this is the case, I have stated as my opinion that I do not consider that in these townships the girth should be again raised to 3 feet, for in that case, as the trees rarely ever reach 3 feet in girth, hardly any licenses would ever issue; but that the girth should be still kept at 2 feet. At the same time, I do not consider that the forests should be overworked, and so the issue of licenses should either for the time be temporarily stopped, or be so limited that no harm would result.

4. I consider that the rate per license for boiling cutch should be largely increased for the reasons given in my No. 3145-5F., dated the 19th March 1892, to the address of the Conservator of Forests, Eastern Circle (copy herewith forwarded).

From F. S. Copleston, Esq., Commissioner of the Southern Division, to the Conservator of Forests, Western Circle,—No. 2614-12F., dated the 2nd June 1892.

I have the honour to forward the Forest Administration Report of the Minbu division for 1891-92. I do not see how the maintenance of the rule allowing cutch trees of 2 feet in circumference to be cut in Minbu can be justified in case the Forest Officers are of opinion that the trees can grow to the size usual in other parts of the country. I suppose there is really little doubt that they often do grow to be 3 feet in circumference if allowed the opportunity of doing so.

From Major W. F. H. Grey, Deputy Commissioner, Shwebo, to the Commissioner of the Northern Division, —No. 585-82, dated the 18th May 1892.

I have the honour to forward herewith report of the Deputy Conservator of Forests, Mu division.

Endorsement by Lieutenant-Colonel C. B. Cooke, Commissioner of the Northern Division,—No. 989-18S. (Forest), dated the 27th May 1892.

Forwarded, together with my remarks thereon, to the Conservator of Forests, Eastern Circle, Upper Burma. I presume the remarks of the Deputy Commissioner, Katha, have reached the Conservator direct.

Remarks by Lieutenant-Colonel, C. B. Cooke, Commissioner of the Northern Division, on the report of the Deputy Conservator of Forests, Mu Division, for the year 1891-92.

The report shows that the Divisional Officer has been actively engaged during the year in travelling through his charge and examining the forests. The six forests, with an area of 345 square miles, proposed for reservation in 1890-91 have not yet been visited by a Forest Settlement Officer as no one could be spared for that duty. Six more forests, with an area of 280 square miles, have been defined provisionally, but notifications had not issued up to the end of 1891-92, and it is mentioned that proposals for reserving three more forests with an area of 91 square miles are about to be submitted.

2. There were only 16 offences against the forest laws reported. In 10 cases, in which 68 persons were implicated for boiling cutch without a license, the offences were compounded for a cash payment of Rs. 87. From the remarks of the Deputy Commissioner of the Katha district it is evident that the Forest Officers go out of their way to make the rules as little irksome as possible to the people, and the result of course is that the relations between the people and the Forest Department are most satisfactory.

3. The financial result of the year's work is a net surplus of Rs. 90,024. The figures of the previous year have not been given, so a comparison cannot be readily drawn.

From Major C. H. E. ADAMSON, C.I.E., Commissioner of the Central Division, to the Conservator of Forests, Eastern Circle,—No. 1949-14F.F., dated the 26th May 1892.

I HAVE the honour to forward the Annual Report on the Mu Forest division for 1891-92. I have no special remarks to make, nor have I heard of any complaints against the action of Forest Officers in this division.

Endorsement by Lieutenant-Colonel C. B. COOKE, Commissioner of the Northern Division,—No. 1089-13K., dated the 30th May 1892.

COPY of the following forwarded to the Conservator of Forests, Eastern Circle, Mandalay, for information.

Endorsement by G. G. COLLINS, Esq., Deputy Commissioner, Katha,—No. 1315-12F., dated the 14th May 1892.

COPY of the following forwarded to the Commissioner, Northern Division, for information.

The report is being sent through the Deputy Commissioner, Shwebo.

Note by G. G. COLLINS, Esq., Deputy Commissioner, Katha, on the Forest Report of the Deputy Conservator of Forests, Mu Division.

As regards that part of the Mu forests which lie in Katha district there is little I can add to Mr. Murray's notes.

The people living in the vicinity were not sure of their rights and privileges, and I requested that a Forest Officer might visit them.

Mr. Murray, as his report shows, travelled right through the locality from Wuntho to Pinlèbu and up to Mansi. I was fortunate enough to be able to accompany him, and every matter connected with forest procedure of interest to the people was explained to them, and some simple rules for their guidance were framed and published.

Many persons requiring timber for erection of monasteries received their permits, and Mr. Murray arranged that when applications were necessary that they, owing to the distance from his headquarters being so great, could best be made to the Subdivisional Officers, who might, if he considered right, permit persons to move a percentage of any timber they applied for, while the application went on to the Forest Officer to avoid great delays.

This arrangement is very satisfactory. The relations between the people and the Forest Department are satisfactory, and no complaints regarding payment of dues or of obstruction to trade, or to the supply of timber, &c., for domestic purposes, has arisen.

Endorsement by A. S. FLEMING, Esq., Deputy Commissioner, Pyinmana,—dated the 20th May 1892.

FORWARDED to the Deputy Commissioner, Yamèthin, with the request that he will forward the report to the Commissioner, Eastern Division.

Remarks.—The forest revenue of the Pyinmana district was Rs. 3,47,395, or more than double the revenue realized from all other sources.

There has been a large decrease of revenue compared with the previous year, due to diminished exports of teak timber by the Bombay Burma Trading Corporation. The duty realized on these was Rs. 4,58,240 less than in the previous year, the outturn being only about two-fifths of that of 1890-91. This decrease was entirely due to the short rainfall. The Deputy Conservator tells me that there were actually more logs launched last year than in any previous year, but that as there were no rises to speak of, only a small proportion floated out.

Teak.—The actual outturn exported by the Bombay Burma Trading Corporation was 31,179 tons. Private traders took out 1,460 tons in logs for use in Upper Burma, and about 258 tons in converted timber; of this about 50 tons were in the form of wooden trays and food-boxes, and about 20 tons in the form of spokes for cart-wheels. About 6½ tons of spokes were exported to Lower Burma on payment of an export duty of Rs. 25 a ton besides local duty. In addition to the above teak timber which paid duty, about 207 tons were extracted free of duty for the construction of religious buildings and works of public utility.

Other timber.—There is an increase of Rs. 7,699 in revenue realized from other timber. This is due to the protection of pyingado, pyinma, ingyin and thitya trees outside reserves since August 1891. Previous to that any such trees could be cut or removed free of duty. Since then only trees marked by the Forest Department for felling can be cut, and a duty of 8 annas a tree is levied. In 1890-91 only 865 trees of unreserved kinds paid duty. These were cut inside reserves, where the duty is Rs. 2-8-0 a tree. This year 2,239 trees were taken from reserves at Rs. 2-8-0 a tree and 6,444 trees were taken from outside reserves at 8 annas a tree. Practically speaking these are all pyingado trees cut for sleepers, and as the outturn of sleepers has only increased from 7,250 tons in 1890-91 to 7,263 tons in 1891-92, it is probable that not many more trees were actually extracted than in the previous year. It is matter for congratulation that the indiscriminate cutting of this valuable timber has

been stopped and brought under proper control. The figures above given include the Yamèthin district.

Cutch.—The only other item which calls for remark is the cutch trade. The number of licenses issued in this district increased from 755 in 1890-91 to 1,012 in 1891-92. The licenses were issued somewhat freely in view of the bad harvest. It was supposed that each license would support four families, and in most cases the licenses were issued to four men each. This supposition appears to have been fallacious, and in most cases only one of the four men worked under each license. The Deputy Conservator tells me that one man and his wife are sufficient to work each cauldron, and in most cases do so. There are very few full-grown cutch trees left in the district, and the licenses were mostly issued for the extraction of cutch from old stumps which had been left by former cutch-boilers as not worth the trouble of removal. It is to be feared that the number of licenses issued was more than could find a remunerative outturn from legitimate sources, and numerous cases have occurred of undersized cutch trees being cut, and of than, lein, yon and similar trees being barked to supplement the cutch extract. The cutch industry provides employment for a considerable number of people, but until the cutch areas have recovered the excessive extraction of past years, it will be advisable to confine the issue of licenses strictly to areas where a remunerative outturn can be legitimately obtained. Cutch-boilers, as a rule, are men of no capital, and being heavily in debt to the traders from whom they take advances for their licenses and subsistence, they resort to the quickest means available to increase their outturn without having much interest in its quality, as they have to make it all over to the trader at a fixed price. If the boilers could be made independent of the money-lending traders, they would place much more value on their licenses and be directly interested in the quality of their outturn ; if no scheme can be devised to effect this, it would be better, I think, to lease certain areas to the capitalists for the extract of cutch, and hold them responsible for the due observance of the forest law within their areas. Twenty-nine licenses in six cases were cancelled during the year owing to undersized cutch trees having been found cut in their areas. In one case 13 licensees were held jointly responsible for the breach of conditions. Since the close of the year many more cases have come to light, the near approach of the expiration of the licenses making the licensees care little for their cancellation. The Deputy Conservator is preparing a further report on this subject.

Endorsement by G. CARMICHAEL, Esq., Officiating Deputy Commissioner, Yamèthin,—dated the 21st May 1892.

FORWARDED to the Commissioner, Eastern Division. I have little to add to the full note made by the Deputy Commissioner, Pyinmana. As regards the cutch-boiling in Yamèthin, on account of the bad harvest a larger number of licenses were issued than would ordinarily have been done. There is no doubt that this is too many for the actual number of serviceable cutch trees in the district. The scheme proposed by the Deputy Commissioner, Pyinmana, of leasing restricted areas to certain capitalists would entail very close supervision and a larger establishment than is now employed. It would be advisable, however, to make the agents who now pay for the licenses jointly responsible with the boilers for the proper observation of the forest laws. As regards the relief afforded by the issue of an extra number of licenses, I found that the average number of families employed at a boiling was three ; in one case I found as many as seven.

Endorsement by J. E. BRIDGES, Esq., Commissioner of the Eastern Division,—dated the 21st May 1892.

FORWARDED to the Conservator of Forests, Eastern Circle, Mandalay.

From A. T. A. SHAW, Esq., Deputy Commissioner, Myingyan, to the Commissioner of the Southern Division,—No. 782-13G., dated the 16th May 1892.

I HAVE the honour to forward the annual report submitted by the Deputy Conservator of Forests. The only portion which refers to this district relates to the granting of cutch licenses. In October and November, at the time of the scarcity, several applications were put in for cutch-boiling licenses. Fees were paid in and the applications forwarded to the Deputy Conservator of Forests. After a time he returned several applications, stating that a sufficient number of licenses had already been granted. The money therefore had to be refunded. I intend in future to get the Subdivisional Officers to report on all licenses before forwarding them, whether there are sufficient full-sized trees in the locality to enable petitioners to boil cutch through the season. During the past year it seemed to me to be best to give every opportunity to get work to the applicants.

Endorsement by F. S. COPLESTON, Esq., Commissioner of the Southern Division,—dated the 26th May 1892.

FORWARDED in original to the Conservator of Forests, Western Division.

G. B. C. P. O.—No. 4077, B. S., 17-8-92.—290.